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ABSTRACT

Designed for use either as a self-study tool or as the basis for a five-day workshop, this curriculum package provides public sector trainers with an opportunity to develop and improve their skills in the areas of assessing training needs, designing and conducting training programs, and evaluating training programs. It contains four leader's guides and four participant's sourcebooks. The first set of guides discusses preparing a workshop, and contains checklists, sample daily schedules, and a bibliography. Examinations of the needs assessment process, learning objectives, schedules of activities for both the session and an on-site training lab, and a bibliography are included in the second set of guides. Designing and conducting training programs is the subject of the third set of guides, which describe learning theories, models, and practices and how to apply them. The final set of guides, which cover training evaluation, discusses how to assess the reliability and validity of training techniques. Each leader's guide includes step-by-step instructions for conducting the training sessions, and each participant's sourcebook contains exercises and exhibits. (MN)

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Training of Trainers

by

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U.S. DEPARTMENT OF HEALTH,
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**National Training and Development Service
for State and Local Government**

Trainer's Resource Service

The National Training and Development Service for State and Local Government (NTDS) serves as an information clearinghouse and training service for public sector trainers and provides technical assistance to public and private agencies attempting to improve public management.

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PREFACE

This curriculum package of training materials is the product of a one-year project funded by the Intergovernmental Personnel Act (IPA) of the U.S. Office of Personnel Management. The purpose of the project was to develop, design, and deliver a workshop and accompanying curriculum materials appropriate for training public sector trainers.

A number of activities were conducted during the year to gather data regarding the needs of state and local government trainers and employee development specialists. This included a national survey of public sector trainers, the results of which are available from the Trainer's Resource Service (TRS). Based on the results of this survey, the TRS staff, with the assistance of David W. Tees from the Institute of Urban Studies of The University of Texas at Arlington, designed a five-day workshop to test the materials in this curriculum package. The workshop, which was held in Dallas, Texas, was attended by trainers and educators from all across the country. The materials used were revised according to participant reactions and staff evaluations.

The National Training and Development Service for State and Local Government and the Trainer's Resource Service are proud to have taken part in a project that has produced a much needed resource in the area of training public sector trainers.

Claudette D. Chmura
Research Associate

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INTRODUCTION

Why Train Trainers?

More often than not, individuals within an organization stumble into the role of trainer or employee development specialist without any formal preparation, experience, or special education. As a result, they find themselves trying to organize a training program or department in a trial-and-error, hit-or-miss fashion. Another problem is that these individuals usually perform many duties in their position and thus perform the role of trainer only on a part-time basis. Lack of time, money, resources, and knowledge—all contribute to the training and development dilemma in the public sector.

In February 1978, the Trainer's Resource Service of the National Training and Development Service for State and Local Government conducted a nationwide survey of public sector trainers to determine in what areas trainers wanted to improve their competencies. The results indicated a strong need to develop skills in the areas of the learning specialist (i.e., how to assess training needs and how to design, conduct, and evaluate training programs). The *Training of Trainers*, a national workshop and curriculum package, was developed in response to these expressed needs.

This curriculum package is unique for three reasons. First, the subject material is based on the expressed needs of public sector trainers themselves, not on the desires of any one individual or group. Second, this manual is designed for the public sector trainer whose organization, problems, and needs are very different from private business and industry. Third, this manual does not adhere to any one theory or approach as the only way to conduct a workshop or to develop skills. The approach is simple, basic, and practical; it is not sophisticated and it is not expensive to carry out. The materials and instructions provided are suggestions--not mandates—and merely provide a foundation upon which the trainers can add their own preferences and style.

Everyone involved in developing the *Training of Trainers* is committed to the far-reaching task of assisting public sector trainers in developing their skills and increasing the impact of training on the organizations they serve. It is hoped that this manual will help carry out that task.

The Curriculum Package

This curriculum package is designed with two purposes in mind. First, it is a self-study tool to help the individual to acquire a knowledge of the basic skills of the learning specialist. Second, the package can be used to conduct a five-day *Training of Trainers Workshop*, including detailed sessions and activities, handout materials, exercises, and facilitator instructions.

This curriculum package provides public sector trainers with an opportunity to develop and improve their skills in three fundamental performance areas:

- *Assessing Training Needs*. This is the ability to diagnose the performance requirements of employees in an organization. It is essential that the trainer know what kind of information can and must be gathered before training programs are designed and implemented. This information must be gathered continuously in order to develop training designs appropriate for changing job requirements and individual learners.
- *Designing and Conducting Training Programs*. This is the ability to conceive an overall design for training programs. Such designs must consider the learning environment, individual needs, goals of learners and their sponsoring organizations, the appropriate mix of learning techniques, and ways of transferring learning from the classroom into the actual work environment. Trainers must also become flexible in the way they deliver training and receive constructive assistance.
- *Evaluating Training Programs*. This is the ability to develop and use appropriate evaluation techniques. This process includes: determining training standards; selecting a research design, evaluation instruments, and sampling plan; implementing the evaluation; analyzing the data gathered; and reporting the conclusions of the evaluation. Trainers can often justify the continuation of training programs by using these techniques.

The curriculum package contains four Leader's Guides and four Participant's Sourcebooks. The Leader's Guides contain step-by-step instructions for conducting the training sessions. The user may vary or rearrange the format to complement individual training style. The Participant's Sourcebooks, which contain all exercises and exhibits, are attached to each Leader's Guide. The guides, which can be used separately or as a comprehensive training program, include:

- *A Five-Day Program Design*, which discusses how to prepare for a workshop. Included are checklists, sample daily schedules, and a bibliography for additional readings.
- *Assessing Training Needs*, which explains how to conduct a needs assessment. Included are a discussion of the needs assessment process, learning objectives, schedule of activities for both the session and on-site training lab, and a bibliography.
- *Designing and Conducting Training Programs*, which describes learning theories, models, and practices and how to apply them. Included are an overview of training design, learning objectives, schedule of activities for both the session and an on-site training lab, and a bibliography.
- *Training Evaluation*, which discusses how to assess the reliability and validity of training techniques. Included are an overview of training evaluation, learning objectives, schedule of activities and exercises for both the session and an on-site training lab, and a bibliography.

GUIDE NO. 1

A FIVE-DAY PROGRAM DESIGN

Leader's Guide

by David W. Tees

National Training and Development Service
for State and Local Government

Trainer's Resource Service

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THE AUTHOR

David W. Tees is Training Coordinator for the Institute of Urban Studies at The University of Texas at Arlington, a position he assumed after more than 10 years of service in city administration and applied research for the State of Texas. He holds a bachelor's degree in the humanities and a master's degree in public administration from The University of Texas at Austin. Mr. Tees was selected by the National Training and Development Service, following a nationwide search, to be the dean/facilitator for its five-day *Training of Trainers Workshop* and to prepare associated curriculum materials. He is a consultant to state and local government agencies and currently specializes in the preparation of training designs and strategies.

A FIVE-DAY PROGRAM DESIGN

This guide is intended to give the trainer a suggested schedule of activities for planning and conducting this workshop. Included are checklists, suggested activities, pre- and postplanning exercises, and a bibliography.

It is important to note that this curriculum package subscribes to the principles and practices of andragogy, a term used to describe the emerging technology of educating adults. This adult learning process creates conditions for learning that are supportive of the growth and development of adult trainers. These conditions include:

- *Cultivating a need to learn*—Helping trainers to relate to the personal improvement potential of the workshop and to identify the gap between their present performance levels and the levels to which they aspire.
- *Structuring the learning environment*—Giving consideration to the physical arrangement of people and space, the individual needs of participants for group interaction and quiet reflection, and the allocation of time for classroom work and recreation.
- *Respecting individual learning needs and styles*—Providing trainers a mixture of learning activities including presentations, skill practice, and practical applications.
- *Encouraging application planning*—Supplying trainers with techniques for identifying practical ways to apply what they are learning to present situations or those they may encounter in the future.
- *Providing for experimentation*—Furnishing trainers an opportunity to test learning experiences where they can observe, support, and react critically to one another.
- *Stimulating a review of learning progress*—Helping trainers measure their learning progress at frequent intervals and share their opinions and concerns with one another.
- *Furnishing a model*—Using the workshop to demonstrate an effective application of adult learning principles that trainers can relate to their own experiences and future practices.

PREWORKSHOP PLANNING ACTIVITIES

Before conducting a workshop, a trainer must carry out many preliminary tasks to ensure a successful program. The following activities are designed to aid the trainer in preworkshop planning.

Checklist

The trainer should develop a detailed checklist, which should be prepared at least four to five months prior to the workshop (see Exhibit A). The checklist should include the following items:

_______ Assign planning responsibility.

_______ Formulate the training design.

_______ Prepare a budget.

_______ Select the target audience.

_______ Determine dates.

_______ Publicize the program.

_______ Secure the training team.

_______ Secure the training facilities.

_______ Coordinate staff field assignments.

_______ Prepare and order training materials.

_______ Arrange transportation.

Workshop Learning Contract

The objective of this activity is to make participants and their organizations accountable for workshop learning and how it will be used to improve the organization's training capabilities.

- Participants should receive a copy of the Workshop Learning Contract prior to their arrival at the workshop (see page 1–12).
- Instructions for completing the contract should be followed as closely as possible.
- Participants should bring their learning contracts to the workshop and regard them as master plans for the week's work.

Staff Meeting

It is good practice to arrange a meeting of training team members and staff prior to the start of the workshop (e.g., the afternoon or evening before the first workshop activities are scheduled). This meeting is particularly important if members of the training team have not previously worked together. During the meeting, members should:

- Discuss and clarify similarities and differences in style and need for support among members of the training team;
- Review the roster of participants, daily schedule, and other related activities; and
- Inspect the physical layout of the training facilities and provide for special requests.

Workshop Notebook

A workshop notebook for participants should be prepared in advance and include:

- *An introduction,* which should outline the week's activities, information on training labs, services available, and other pertinent information.
- *Exercises and exhibits,* which should be organized according to the sequence of activities and divided into sections by tabs.
- *A list of participants,* which should provide names, addresses, and telephone numbers of all registrants.
- *A faculty and staff directory,* which should provide a brief biography of each member of the training team and staff, along with their addresses and telephone numbers.
- *Sheets of blank paper,* which should encourage the development of a daily journal of notes and ideas.

It is suggested that a three-ring binder be used for the notebook. This will allow for insertion of additional materials during the week.

SCHEDULE OF WORKSHOP ACTIVITIES

Exhibit B outlines a weekly schedule of activities for conducting this five-day workshop. Work periods are blocked out with short titles to describe the training sessions; one-hour lunch breaks should be included wherever appropriate. Preparation time for the training labs, to be arranged by the participants, should be scheduled outside of workshop hours.

ORIENTATION AND EVALUATION ACTIVITIES

The following are suggested agendas for registration and orientation activities on the evening prior to the first day of the workshop and review and evaluation activities on the last day. Detailed agendas for the training labs are included in each leader's guide.

EXHIBIT A. PREWORKSHOP PLANNING CHECKLIST

This checklist will help the trainer prepare for a successful seminar. Space is provided for writing in additional remarks.

FACILITIES

______ Has an off-site location (motel or hotel) been selected for the seminar? Have site arrangements been confirmed in writing?
______ Has a preseminar inspection check been made at the site?
______ Any charge for meeting rooms? Is the cost within the budget?
______ Has the meeting room been reserved?
______ Are air conditioning, heating, lights, and ventilation acceptable?
______ Has the seating plan been furnished to the meeting site in advance? Will the room be ready on arrival?
______ Are there other tables in the meeting room to hold materials?
______ Is there a copying machine on the premises? If not, where is the nearest machine and what is the charge per copy?
______ If not bringing own coffee pot, have arrangements been made with the hotel to furnish coffee? Have times been set during morning and afternoon for delivery of refreshments? Have the charges and billing been agreed upon?
______ Will fresh water, ice, cups, and ash trays be on meeting room tables every day?
______ Other ______________________________
______ Other ______________________________

CONSULTANT

______ Has a signed contract been received?
______ Have arrangements been made for meeting and transporting the consultant to the seminar site?
______ Will the consultant bring materials? Do materials need to be duplicated? What do you need to furnish?
______ Has time been taken with the consultant to review the workshop plan and style to assure complementary training approaches?
______ Has the consultant been briefed on participant expectations?
______ Has the consultant been asked to sign travel and purchase of service vouchers before departure?
______ Other ______________________________
______ Other ______________________________

PROMOTION MATERIALS

______ Has a survey of the client group been made to determine its needs and interests in advance?
______ Has enough time been allowed for printing announcements? Have announcements been sent out on schedule?
______ Have notices of the seminar been posted on bulletin boards and reception areas in your organization?
______ Has a news release about the seminar been distributed two weeks in advance?
______ Will a group photograph be taken? Is a photographer needed?
______ Will photographs taken at the seminar be distributed to all participants?
______ Has a copy of the seminar roster been given to the artist for lettering participation certificates?
______ Other ______________________________
______ Other ______________________________

PARTICIPANTS

______ Has preregistration been arranged for all participants?
______ Have all tuition checks been received?
______ Has a letter with last-minute instructions, reading materials, and directions to seminar been sent to all participants?
______ Have participants been reminded to bring training policy statements?
______ Will personal contacts be made if desired enrollment is not reached one week before seminar?
______ Have envelopes been prepared for each participant to be placed at the registration desk? Has the room key been enclosed? Is there a welcome note?
______ Other ______________________________
______ Other ______________________________

MISCELLANEOUS

______ Have evaluation instruments been ordered well in advance? Received?
______ Are all reading materials duplicated and punched? Have they been inserted in chronological order in manila envelopes, labeled with contents and the day to be used?
______ Are all materials to be written on newsprint pads done in advance? Are they in chronological order?
______ Have looseleaf notebooks been purchased for each participant? Have labeled dividers been inserted?
______ Has a tentative roster of participants been duplicated for first-day distribution?
______ Are name tags ready for distribution?
______ Are ruled pads and ball-point pens on hand for each participant?
______ Are all books and journals assembled and packed?
______ Have materials to be written on easels and newsprint pads been prepared in advance?
______ Are felt-tip pens—at least a dozen—in several colors on hand?
______ Is there masking tape? Scotch tape? Scissors?
______ Are projectors (16mm or Super 8mm), screens, and take-up reels available? Will the hotel supply? (Optional)
______ Is there recording equipment—microphones, recorders, cassettes, tapes?
______ Are there extension cords, extra lamps, three-way plug adapters?
______ Is there a camera? Film? Flashbulbs?
______ Is there a pad posted on meeting room door to record messages and phone calls during working sessions?
______ Have breaks been scheduled?
______ Other ______________________________
______ Other ______________________________

EXHIBIT B. SCHEDULE OF WORKSHOP ACTIVITIES

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
Morning						
8 a.m.						
9 a.m.		Assessing Training Needs	Designing and Conducting Training Programs	Training Evaluation		Training Lab Critique
10 a.m.					Training Lab	
11 a.m.						Learning Applications Planning
12 Noon						
Afternoon						
1 p.m.						
2 p.m.						Review and Evaluation
3 p.m.						
4 p.m.	Registration					
5 p.m.						
6 p.m.	Workshop Overview					
7 p.m.						
8 p.m.						
9 p.m.						

A FIVE-DAY PROGRAM DESIGN

Time **Activity**

4:30 p.m. (90 minutes) **Registration**

1. Participants register for workshop.
2. Participants are provided with a workshop notebook containing all materials and are asked to review the information section. Name tags, pens, and other necessary items are also furnished to the participants.

6:00 p.m. (45 minutes) **Orientation**

This activity is designed to welcome participants and to establish the credibility of the program and the training staff.

1. The lead trainer outlines the program and discusses:
    - The overall objectives of the workshop.
    - Organization of the program and the schedule for the week.
    - Available resources, including support services.
2. The lead trainer introduces other members of the training team and workshop staff.
3. The lead trainer solicits questions and comments from the participants regarding their expectations of the program and training team.

Note: The facilitator may choose to conduct some warm-up exercises to allow participants to get to know one another.

6:45 p.m. (30 minutes) **Setting Learning Priorities**

The objective of this activity is to provide participants with an opportunity to determine skill improvement goals consistent with their own needs and the purposes of the workshop.

1. Ask participants to read the instructions for completing the *Skills Improvement Graph* (see page 1-14).
2. Ask participants to complete the *Skills Improvement Graph* with a blue pen (see page 1-15).
3. Point out that the graph will be useful to participants upon completion of the workshop in order to compare their skill improvement as they see it with what they hoped for when they set their goals.

7:15 p.m. (30 minutes) **Selecting a Training Lab***

The objective of this activity is to identify individual preferences for the three training lab options available to workshop participants.

1. Explain to the group the three options available and what each selection has in its favor. The options are to:
    - Assist designated personnel from a municipal organization to prepare a training needs assessment plan for their departments.
    - Conduct a training program for a group of city personnel on "Supervisory Functions: Work Planning and Writing Objectives."
    - Evaluate the learning impact and the process effectiveness of the training session described in the second option.
2. Ask participants to decide which of the options they prefer. To affirm the selection, ask participants to form groups under one of three signs posted on the wall of the training room. The signs may be worded as follows:
    - Needs Assessment.
    - Training Design and Conduct.
    - Evaluation.
3. Each group of participants is joined by a designated staff trainer who provides information about the training lab and explains the individual roles group members will be playing. Each group also schedules a time to meet outside workshop hours to prepare for their training lab.

7:45 p.m. **Workshop is adjourned** until 8:30 a.m. the following day.

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*Note: Activities for each training lab are included in each leader's guide.

REVIEW AND EVALUATION PLANNING

The following activities take place on the last day of the workshop after the training lab critiques.

Time | **Activity**

11:00 a.m.
(60 minutes)

Learning Applications Planning

The objective of this activity is to provide each participant with an opportunity to share a specific plan for the transfer of workshop training and to receive comments on its merits from group members.

1. Ask participants to complete a *Postworkshop Application Plan* (about 20 minutes—see page 1-16).
2. When all participants have completed their plans, ask them to read their plans aloud to other group members to provide constructive comments (about 40 minutes). Encourage each person to use the following guidelines:
   - What impresses me most about your program is. . . . (include two or three specific items).
   - What concerns me is . . . (describe major oversights or obstacles observed).
   - What I hope you will consider is . . . (suggest directions for further thinking or planning, but avoid telling the person what you think they should do).

12:00 noon

Lunch

1:00 p.m.
(60 minutes)

Learning Applications Planning (Continued)

The objective of this activity is for each participant to compare actual skill improvement with goals set earlier in the workshop. Ask participants to take out the *Skills Improvement Graph* used at the start of the workshop and to chart postworkshop skill levels as follows:

1. In each column on the graph, place a dot at the percentage that corresponds to your perceived skill level as a trainer today. Use a black pen for this.
2. Add to the graph any new trainer skills obtained during the week but not anticipated when the original graph was prepared. Place a dot opposite the perceived level of skill with a red pen.
3. Connect the dots with a solid line.
4. When the new line is drawn, be prepared to answer these questions about your graph:
   - In general, does my skill level line show that my skills as a trainer have increased substantially this week?
   - In general, is my skill level line higher, lower, or about the same as the broken line designating my goals for the week?
   - How many new, unanticipated skills have I added to my graph?
   - If I have not been successful in meeting my goals for the week, how do I account for this?
5. Ask participants to discuss their results with the group. The lead trainer then asks participants if the program achieved its goals.

2:00 p.m.
(30 minutes)

Review and Evaluation

The objective of this activity is to secure from each participant a written reaction to the workshop as a learning experience.

1. Ask participants to complete a written evaluation form on the workshop.
2. Ask participants to evaluate the program orally.

2:30 p.m.

Workshop Adjourns

SUGGESTED READING

Adult Learning Theory and Practice

Bacon, Alma. "How to Start a Seminar." *Training and Development Journal* (December 1977).

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Training and Development Journal. Published monthly by the American Society for Training and Development.

Training: The Magazine of Human Resources Development. Published monthly by Lakewood Publications, Inc.

Verdnin, John et al. *Adults Teaching Adults*. Austin, Texas: Learning Concepts, 1977.

TRAINING OF TRAINERS

GUIDE NO. 1

A FIVE-DAY PROGRAM DESIGN

Participant's Sourcebook

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by David W. Tees

**National Training and Development Service
for State and Local Government**

Trainer's Resource Service

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SUGGESTED WORKSHOP LEARNING CONTRACT (A PREWORKSHOP ASSIGNMENT)

The *Training of Trainers Workshop* is rich in benefits for public sector trainers and their organizations. For the trainer, the workshop can mean significant progress toward future career goals. For the organization, the workshop can mean greater effectiveness from training that is well worth the costs involved.

The trainer and organization will realize the greatest benefit from this learning experience if both feel accountable for the trainer's learning and plan to use it to improve the quality of the organization's training.

In order to receive the maximum benefits from the workshop, you and your supervisor should share each other's needs and expectations from the experience in advance.

Step 1. Arrange a meeting with your supervisor(s) to discuss and agree on several important things about the workshop. Set a time and date and notify the parties concerned far enough in advance to avoid scheduling conflicts. Find a quiet place, free from distraction, to hold the meeting. Allow enough time to get your work done, at least one hour. Several days ahead of time, circulate a copy of the agenda and workshop literature to those who will be attending the meeting. Ask them to read the materials and be prepared to share their feelings about them with you.

Step 2. Remember that you are trying to share information and reach an understanding with your supervisor(s) on what each of you expects as a result of your attendance at the workshop. The purpose is for both you and your supervisor(s) to feel accountable for your learning. Plan to:

1. Review the attitude and plans of your organization concerning the development of its employees.

   Example: Next year we plan to set aside funds for organizing an employee career development program in the training division. We plan to use our own staff, instead of outside consultants, to develop the program.

2. Review the planned *Training of Trainers Workshop* program.

   Example: What training opportunities are they advertising and how do these opportunities relate to our plans to enlarge and improve our organization's training capacity?

3. Identify areas of growth or improvement in your present (or future) job performance that are realistic to expect from attending the workshop.

   Examples:
   - *Training Needs Identification*—Ability to identify the individual training needs and interests of employees to avoid guesswork in assigning people to training.
   - *Conducting Training Programs*—Ability to plan training programs that prepare people to meet the specific requirements of their jobs.
   - *Evaluation*—Ability to identify when an organization is getting its money's worth from a particular training program.

4. Decide on specific ways in which workshop skills can be applied to improve training in your organization.

   Example: I plan to return from the workshop prepared to draw up an implementation plan and budget for an employee career development program that will be accepted by the management of our organization.

Step 3. Prepare a contract for learning based on the four agenda items outlined above. You can do this by completing the following *Workshop Learning Contract*. Then check your answers against the following criteria to be sure they are:

1. Important for the training function of your organization.
2. Realistic in terms of your organization's perceived training attitude and plans.
3. Appropriate to what the workshop is designed to accomplish.
4. Specific enough that results can be observed and related to workshop training.

When you have completed the *Workshop Learning Contract*, share what you have written with your supervisor(s). This ensures understanding and agreement about what you are to accomplish by attending the workshop.

Step 4. Sign the *Workshop Learning Contract*. Ask your supervisor(s) to do the same. Bring it with you to the workshop and consider it your master plan for making the most of the experience.

SUGGESTED WORKSHOP LEARNING CONTRACT

FOR ______________________________

TITLE ______________________________

ORGANIZATION ______________________________

1. I would describe the attitude (policy commitment and program effort) of my organization toward the development of its employees as:

2. Improvement in training being planned by my organization in the near future includes:

3. My part in these improvement plans is:

4. Specific skills or knowledge that I plan to gain from this workshop include:

5. A specific training program or project I intend to work on after returning to my job from this workshop is:

Signed (Participant)	Signed (Immediate Supervisor)	Signed (Other Supervisor)

INSTRUCTIONS FOR COMPLETING THE SKILLS IMPROVEMENT GRAPH

The *Skills Improvement Graph* is an instrument that can be used by an individual to identify gaps between present and desired proficiency in job-related skill areas. The graph is descriptive rather than judgmental. There are no good or bad ratings. After reading the instructions, begin work on the graph. When you are finished, put the graph in your folder. Do not turn it in; the graph will be returned to later in the workshop.

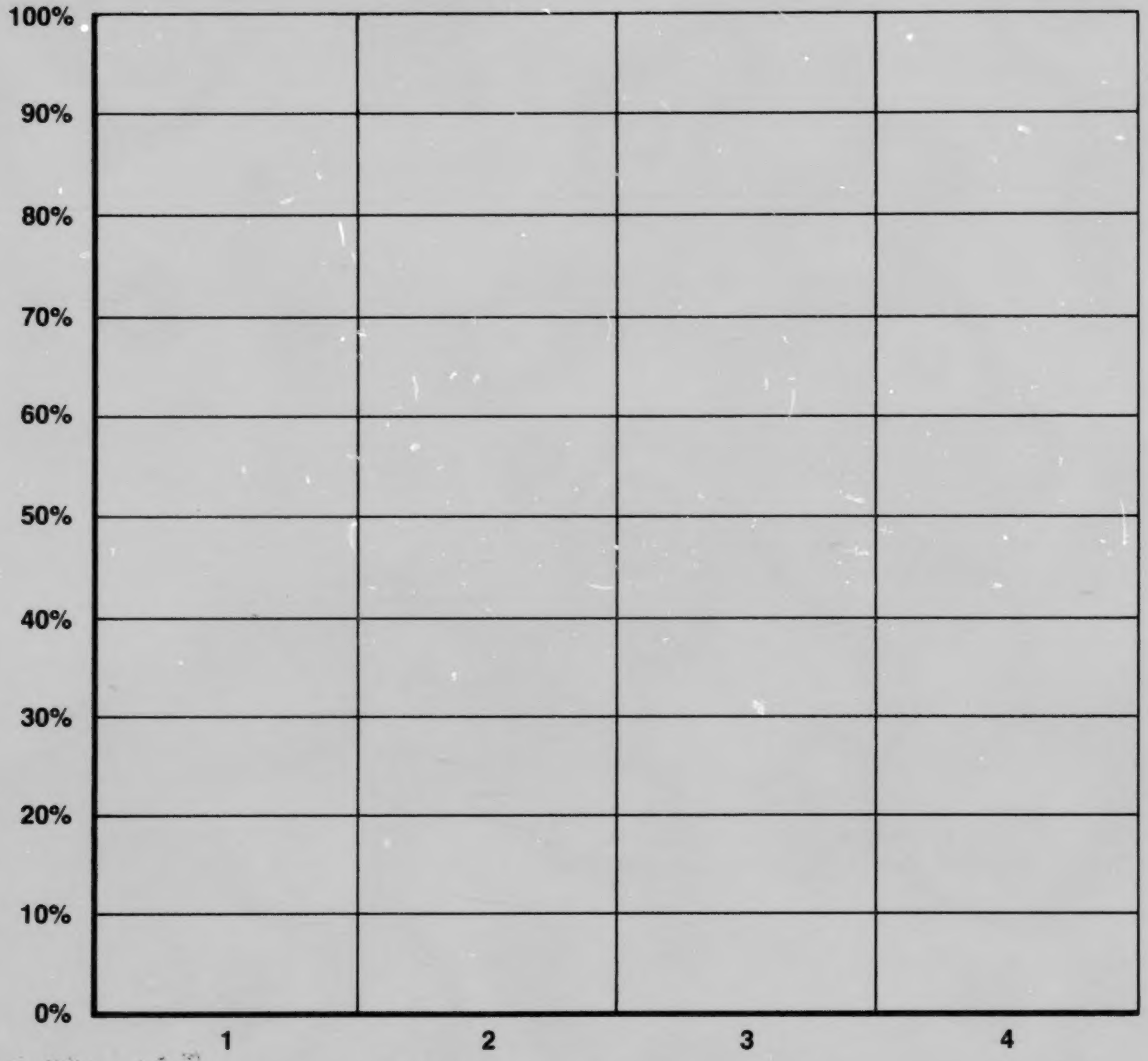
The graph contains four columns that correspond to specific skill development areas to be addressed at this workshop. The graph also contains a scale for personal rating of proficiency in each of the skill areas that range from 0 percent (low proficiency) to 100 percent (high proficiency).

1. Rate your present level of proficiency in each of the skill areas by entering a dot in the column at the percentage that corresponds to what you feel your present level of proficiency is (use a blue pen).
2. Connect the dots with a series of *solid* lines.
3. Rate the level of proficiency you have set as your goal for each skill by entering a second dot in the column at the percentage that corresponds to the level of proficiency you wish to achieve.
4. Connect these dots with a series of *broken* lines.

The resulting gap between your present proficiency and the proficiency you have set as your goal represents a learning need that the workshop may help to satisfy.

SKILLS IMPROVEMENT GRAPH

PROFESSIONAL GROWTH CHART



The following learning areas should be entered on the horizontal scale of each skills improvement graph:

Skill Development Areas

1. Be able to perform learning needs assessments.
2. Be able to provide learnable training experiences.
3. Be able to perform evaluations of learning performance.
4. Be able to ______________________________.*

---

*The lead trainer can include additional skill development areas by expanding the graph.

POSTWORKSHOP APPLICATION PLAN

This week you have been writing in your daily journal ideas that you felt might be useful later on in improving your performance as a trainer or changing your work environment. We would like for you to select one of these ideas, preferably the one that interests you most. Design an application strategy for your idea using the following steps:

1. What is the idea? Be brief but *specific* in describing what you want to do and when it is to be done.

2. What is the problem you plan to alleviate or what is the improvement you hope to realize?

3. Who or what stands as an obstacle to the achievement of your plan? (Include factors external to yourself such as scarcity of funds, other work priorities, low appreciation of need, and factors inside yourself such as other work to be done, tendency to be easily discouraged, and nonassertive temperament.)

4. Who or what can be counted on to support the achievement of your plan? (Include factors external to yourself such as management support, desire to make a change, staff help, and factors inside yourself such as interest, expertise, and influence.)

5. What will you do to remove the obstacles and strengthen the support for carrying out your plan?

When you have completed your application plan, be prepared to share it with other workshop participants.

TRAINING OF TRAINERS

GUIDE NO. 2

ASSESSING TRAINING NEEDS

Leader's Guide

by F. Gerald Brown

**National Training and Development Service
for State and Local Government**

Trainer's Resource Service

THE AUTHOR

F. Gerald Brown is Director of the Graduate Program in Public Administration, University of Missouri at Kansas City. He received his master's degree in Public and International Administration and his doctoral degree from the University of Pittsburgh. In addition to teaching and performing research in public administration, he has conducted training programs for city managers and other municipal employees in management development and human relations and has consulted on organization development with several cities. He has worked with local government as a member of the city manager's staff in Saginaw, Michigan, and was a staff member of the International City Management Association and a faculty member of the University of Pittsburgh contract team at the Institute of Administration, Zagria, Nigeria. His publications include *Emerging Patterns in Urban Administration; Developing Municipal Organizations; Intergovernmental Policy Making Workshop: A Learning Package About Interjurisdictional Policy Management for Elected, Appointed, and Citizen Leaders*; and *Assessing Training Needs*. His experience as a trainer and facilitator with elected officials, administrators, and civic leaders is extensive.

ASSESSING TRAINING NEEDS*

An effective training program in any organization must include a systematic way of identifying who needs to be trained and what organizational goals will be met if training is conducted. This discussion is designed to acquaint you with the needs assessment process as an integral part of an organization's training program. It should help you to understand:

1. Why it is important for a trainer to know about needs assessment methods and to use them continuously.
2. How the needs assessment process fits into a continuous training program.
3. How to identify training needs at different levels within an organization.
4. What steps can be followed in conducting a needs assessment.
5. How to determine those organizational needs that require training and those that do not.

WHAT IS A NEED?

According to the Webster dictionary, a need is defined as a lack of something requisite, desirable, or useful. For an organization, a need pertains to the attainment of its goals at all levels.

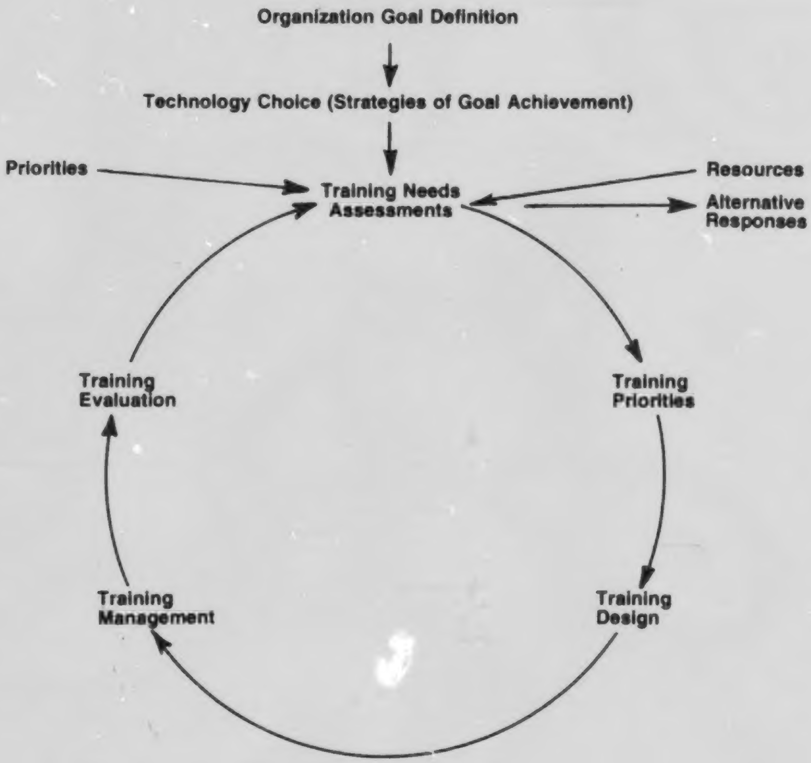
A training need can be defined as:

1. A gap between actual and preferred performance that can be narrowed by training.
2. An outline of desired skills and abilities to be developed over time to improve the performance of an organization (i.e., a human resource investment plan).
3. A need that arises from a diagnosis of organization problems for which training is seen as an appropriate problem-solving strategy.

THE ROLE OF NEEDS ASSESSMENT

For training needs assessment to work effectively, it must be viewed as part of a continuous process of training and development in an organization. A needs assessment is that part of the training program concerned with information gathering that seeks to diagnose an organization's changing requirements, its jobs, and its employees. The needs assessment process is a continuing cycle, as illustrated by the following:

TRAINING SYSTEM MODEL



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*This discussion has been adapted, in part, from the introduction to Brown, Gerald, and Wedel, Kenneth R., *Assessing Training Needs* (Washington, D.C.: National Training and Development Service Press, 1974).

As represented by this model, a training program consists of five components, which include:

1. Training needs assessment.
2. Training priorities.
3. Training design.
4. Training management.
5. Training evaluation.

These five components are viewed as individual steps in a cycle. That is, a *training needs assessment* leads to a set of *training priorities*, which in turn is the basis for the overall *training design* of a program to be conducted for organization employees in a given time period. The programmed *training* must then be managed and the mechanics of implementing the design undertaken. When the training is completed, the outcome should be *evaluated*. This evaluation in turn provides a basis for the next round of *training needs assessments*.

It is also important to view training needs assessment as the link between the training system model just described and the organization itself. Through this process of collecting data, problems may be uncovered for which training may not be a remedy. For example, although training could be one way of correcting a performance problem, a reduction in workloads or improvement in the working environment might be a more effective solution. It is important for trainers to realize that training is not the panacea for all organizational problems. Training should be prescribed only when it appears to be the most appropriate way of dealing with an identified need.

WHERE NEEDS ASSESSMENT BEGINS

Having determined where needs assessment fits into an organization's training system, one should next decide where to begin. In order to get a complete and balanced picture that is consistent with an organization's changing requirements, a needs assessment should be conducted at three levels. These levels include:

1. *The individual level*, to determine the present skill level of individual employees and what new or improved knowledge, skills, or attitudes are needed for current job performance or to fulfill requirements of a new job.
2. *The organization level*, to study the entire organization, its goals, resources, and the environment within which the organization functions.
3. *The job level*, to systematically collect data about each job or position in the organization, its purpose, the tasks that constitute the job, and the knowledge, skills, and attitudes employees must have to perform effectively.

The classroom learning design for this portion of the workshop will concentrate on helping trainers develop skills in performing training needs assessments at all three levels.

NEEDS ASSESSMENT METHODS AND TECHNIQUES

The next step involves determining which needs assessment methods and techniques are best suited for a given organization. Naturally, the answer will vary from one organization to another.

The approach may be an emotional response regarding the type of training to be implemented, or it may be a more rational approach that depends on the judgment of informed people to furnish practical data. It may also be an empirical approach that requires collecting data systematically from many sources. Building on the rational and empirical methods, the following steps may be useful to trainers in conducting a training needs assessment:

1. Talk with people to get their perceptions of the critical areas where a needs assessment should be performed in the organization, as well as the best alternative strategies to pursue.
2. Develop a strategy for the assessment. The strategy should deal with such questions as: Should the assessment be conducted by an individual, by or under the supervision of a group, by a training committee, or by an outside consultant? Consideration must be given to whomever will be primarily responsible and accountable for conducting the assessment.
3. Review the strategy after a short period of time and check it out with other people.
4. Design the assessment instrument itself. This consists of selecting the questions to ask and determining the sources to be used and the methods to be employed.
5. Conduct the assessment.
6. Analyze the findings and prepare a report.

LEARNING OBJECTIVES

The information provided here focuses on training techniques for assessing state and local government training needs. Its purpose is to provide trainers with the necessary skills to carry out a training needs assessment at individual, organization, and job levels. There are four objectives in the learning process:

1. To be able to plan a training needs assessment and, using at least one instrument or technique, conduct an assessment at the individual level.
2. To be able to act as a resource to management in planning and carrying out a needs assessment at the organizational level.
3. To be able to plan and conduct a training needs assessment at the job level, using task analysis.
4. To be able to develop an overall strategy for obtaining and using data from an actual city department (or other public agency) to determine its training needs.*

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*This objective applies only to those participants who elect the training lab that pertains to field work in training needs assessment.

The training activities planned for achieving these four objectives require six hours of lecture, discussion, and exercise work in the classroom for all workshop participants. An additional three and one-half hours of strategy planning for participants in the needs assessment training lab is required, as well as six hours for conducting the training lab itself.

PREREADING ASSIGNMENT

Brown, Gerald, and Wedel, Kenneth R., *Assessing Training Needs* (Washington, D.C.: National Training and Development Service Press, 1974). Ask participants to read this book prior to the start of this session.

ASSESSING TRAINING NEEDS

Time — **Activity**

8:30 a.m.
(30 minutes)

Orientation

This session is designed to give participants an overview of the subject matter to be discussed.

1. Review the organization of the session's schedule and learning objectives.
2. Discuss the following:
   - A definition of the word "need."
   - Relation of needs assessment to an organization's overall training system.
   - Where an organization needs assessment should be conducted.
   - Methods for conducting a needs assessment.

9:00 a.m.
(90 minutes)

Assessing Training Needs at the Individual Level

In this segment, participants learn how to recognize the particular needs of individuals as seen by both the individuals themselves and needs assessors.

Review Topic (30 minutes)

1. Discuss the following:
   - The purpose of conducting a needs assessment at the individual level.
   - The importance of human resource development in an organization and strategies for achieving it (e.g., career planning, good social and psychological climate).
2. Review and discuss the various sources of information, such as:
   - Political and management strata.
   - Personnel records.
   - Individuals and supervisors.
3. Review and discuss the techniques of information gathering, including:
   - Documentary analyses.
   - Interviews.
   - Surveys.
   - Committees.
   - Tests.
   - Individual conferences.
   - Consultations.
   - Self-appraisals.
   - Personnel inventories.
   - Employee accounting (cost/benefit analysis).

Self-Analysis Instrument and Exercise (60 minutes)

The purpose of this activity is to: (1) give participants experience with the backward planning approach to collecting individual training needs data; and (2) work in small groups to gain perspective and compare individual thinking with others.

1. Pass out the *Training Needs Assessment Instrument-Individual Level* (see page 2-13) for collecting needs assessment information. This is an exercise in backward planning—that is, planning that proceeds from a goal statement backward to the definition of elements needed to reach the goal. (Note: The trainer may select another exercise related to individual needs assessments, such as a simulated interview or an exercise in instrument design.)
2. Ask participants to form small groups and proceed as follows:
   - Complete questions 1-6 individually and discuss as a group your answers.
   - Complete questions 7 and 8 individually and share answers in the same groups.
   - Complete question 9 individually and compare answers.
   - Discuss how this self-analysis instrument can be applied in organizations to determine individual needs and how to satisfy them.

10:30 a.m. (30 minutes) **Break**

11:00 a.m. (60 minutes) **Assessing Training Needs at the Organizational Level**

This segment is designed to acquaint participants with the methods used in conducting a needs assessment at the organizational level.

Review Topic (40 minutes)

1. Discuss the following:
   - The importance of understanding an organization's goals before a needs assessment can begin.
   - The importance of being able to manage an organizational needs assessment.
   - The reasons for conducting a needs assessment.
   - Who wants the assessment and what they want from it.
2. Review the questions that can be asked in conducting a needs assessment, such as:
   - What are the organizational goals?
   - What strategies for goal achievement have been tried?
   - What new directions is the organization likely to take?
   - What are the process issues (i.e., how does the organization go about solving problems)?
   - What is the impact of the environment on the organization?
3. Review and discuss sources of information, such as:
   - Results of evaluation research.
   - Organization reports.
   - Budget statements.
   - Laws, ordinances, and regulations.
   - People concerned with the organization.
   - Sources related to training (e.g., books, personnel journals, and bibliographies).
4. Review and discuss the techniques of information gathering, such as:
   - Interviews.
   - Observations.
   - Surveys.
   - Participatory identification techniques (e.g., brainstorming, small problem-solving groups, committees, and interdepartmental group meetings).

- Complaint analyses.
- Consultations.

Role Playing Exercise (20 minutes)

The purpose of this exercise is to give participants the opportunity to use the assessment interview technique to help determine needs within an organization. The first round of role playing should be completed before the training group breaks for lunch. Two additional rounds of this exercise will be conducted after the lunch break.

1. Ask participants to form groups of three. The group should assign one of the following roles to each member:
    - *An organization representative or spokesperson* to provide a problem situation (real or fictitious) within the organization that needs to be solved.
    - *A training officer* to interview the organization representative to identify needs and make recommendations.
    - *An observer* to watch the interaction between the organization representative and training officer and to offer suggestions for improving future performance.

    Note: The observer is a consultant to the training officer, *not* to the organization representative. The observer should identify those items in the interview that were helpful in eliciting information as well as those items that hindered effective needs identification.
2. The exercise proceeds as follows:
    - The organization representative briefly describes an organization problem (e.g., skills deficiency or department inefficiency).
    - The training officer interviews the representative to determine the source and scope of the problem and makes recommendations.
    - The observer reports to the training officer those techniques that were helpful in identifying the issues and those that were not.

Remind participants that such things as organizational goals, discrepancies in goal achievement, solutions already tried, and evidence of skill deficiencies should be included in the analysis. Use the model *Interview Questionnaire* as a guideline for structuring the interview (see page 2-16).

12:00 noon **Lunch**

1:00 p.m. (60 minutes) **Role Playing Exercise** (Continued)

3. Conduct a second round of role playing with members of each group playing a different role (20 minutes).
4. Conduct a third round to give each participant a chance to play the last of the three roles (20 minutes).
5. Ask participants from all groups to comment on the various strategies used and their general reactions to the interview approach for organizational needs assessment (20 minutes).

2:00 p.m. (45 minutes) **Assessing Training Needs at the Job Level**

This segment is designed to acquaint participants with the elements involved in assessing job performance.

Review Topic

1. Discuss the components involved in job analysis, including:
    - What must be done to achieve work objectives.
    - The methods, techniques, and tools used to achieve objectives.
    - The resulting products or services.
    - The qualities and abilities needed to achieve objectives.
    - The levels of performance required.
2. Review the interrelationships of jobs, duties, tasks, and elements of job analysis (see page 2-17).

3. Review the framework for conducting a job analysis, including:
   - How are the jobs classified (e.g., by element, task, position, or job)?
   - What are the performance standards required of the person performing the job?
4. Review the sources of information, such as:
   - Job descriptions.
   - Literature on similar jobs.
   - Work simplification studies.
   - Management requests for training employees.
   - Employees.
   - Quality control information.
   - Performance appraisals.
   - Observations.
   - Interviews.
5. Review and discuss the techniques for information gathering, including:
   - Comparative studies of good versus poor employees.
   - Tests of job knowledge and performance.
   - Actual job performance (i.e., the assessor performs the work to understand the realities of the job and the specific nature of the tasks).

2:45 p.m. (15 minutes) **Break**

3:00 p.m. (75 minutes) **Job-Task Analysis Exercise**

The purpose of this exercise is to demonstrate how to analyze a job, including its tasks and elements, and to identify training needs for each job element.

1. Ask participants to form groups of three or four. Distribute a copy of *Analysis: Job of Government Training Officer* (see page 2-18) and the *Task Questionnaire for Government Training Officer Profile* (see page 2-19).
2. Using the first handout as an instructional guide, ask participants to complete the questionnaire. Participants should list duties and describe and analyze the tasks relative to each of these duties (20 minutes). Review the *Glossary* (see page 2-21) to ensure a common understanding of each term. (In the interest of time, it may be necessary for the groups to concentrate on analyzing only one or two duties from the original list.)
3. Ask groups to chart on newsprint the duties, tasks, and elements they have included for each job and the training needs identified for each job element (10 minutes). Ask each group to be ready to present to all workshop participants the results of its analysis.
4. Ask representatives of each group to tape the group's chart on the wall and share their analysis with all workshop members (30 minutes).
5. Following the group reports, discuss how a job-task analysis can help to identify the training needs of an organization.

4:15 p.m. (15 minutes) **Review of Day's Activities**

This segment is designed to review the content of the day's work and the learning objectives outlined at the start of the program. Ask participants to comment on any unmet needs regarding the needs assessment process and to discuss other ways these needs can be met during the week.

4:30 p.m. **Workshop Adjourns**

ASSESSING TRAINING NEEDS

ON-SITE TRAINING LAB

The purpose of this training lab is to assist personnel from a government agency in preparing a training needs assessment plan for their department. This will involve: meeting with department representatives, designing an instrument to collect data, conducting interviews to determine training needs, analyzing the data, recommending a plan of action for the department, and reporting findings to the entire group.

It will be necessary to secure the cooperation of appropriate municipal or agency officials before the workshop is held. This should include outlining the activities of workshop participants for the training lab and the role of designated officials regarding these activities. It is advisable to select representatives from public agency departments who are interested in organizational needs analysis and who are in a position to implement plans resulting from this analysis.

Time	Activity
(3 hours)	**Training Lab (Preplanning)** Participants who have selected the needs assessment training lab as their field option should meet as a team with the designated staff trainer to: • Develop an interview questionnaire for use in collecting data from representatives from a public agency. As a guide, participants may want to review the *Interview Questionnaire* used earlier (see page 2-16). • Receive instructions from the staff trainer on where they will be working during the field activity, with whom, for how long, and on what. • Decide how presentations of specific needs assessment plans will be made and when. Note: These meetings are to be scheduled outside regular workshop time and arranged by participants and the training staff.
10:00 a.m. the day of the training lab (60 minutes)	**Training Lab (Reconnaissance)** Participants meet on-site with selected representatives of the public agency who have agreed to cooperate in the needs assessment training lab. Following introductions and a briefing on the day's activity by the training staff member, participants will be paired with department representatives and asked to: • Clarify the goals of consultation. • Solicit data about the departments. • Identify training issue areas. • Determine and clarify the roles of interviewer and department representative.
11:00 a.m. (4 hours)	**Training Lab (Survey Planning)** The purpose of this activity is to collect data from department representatives and to formulate plans for implementing recommendations. 1. Pair participants with department representatives. (Teams set their own pace and schedule for completing the tasks in the allotted time.) 2. Each team discusses and agrees upon the strategies for collecting data and designing necessary instruments. (This activity may vary among teams. For example, a department representative may choose to work closely with participants in designing and conducting the survey, whereas others may choose to work independently.) 3. Teams conduct the training needs assessments, including: • Implementation of the survey strategies. • Analysis of survey results. • Preparation of final report with recommendations for training.

3:00 p.m.
(90 minutes) **Training Lab (Survey Reports)**

The purpose of this activity is to review each team's survey strategies and implementation plans. If possible, teams should be joined by department heads and other top-level staff members.

1. Each team gives reports regarding their survey strategies and recommended implementation plans.
2. Department representatives and members of the workshop training staff provide comments and observations regarding the feasibility and appropriateness of the reports.

4:30 p.m. **Training Lab Adjourns**

8:30 a.m.
on the
following
day
(45 minutes) **Training Lab (Critique)**

Participants meet as a group to share their training lab experiences. A member of the training staff should encourage a discussion of various aspects of the lab, including:

- Significant events.
- Surprises or discoveries.
- Principal insights gained.
- Areas of improvement.

About 15 minutes should be reserved to prepare a summary of activities to share with the workshop participants who were involved in other lab experiences.

9:15 a.m.
(90 minutes) **General Critique**

The Training Needs Assessment team joins the other participants for a general critique session. Team members are asked to outline the highlights of their training lab and to share their reactions. The report should not exceed 20-25 minutes to allow enough time for other group reports.

10:45 a.m.
(15 minutes) **Break**

11:00 a.m. **Review and Evaluation Planning**

Follow the Review and Evaluation Planning Agenda in Leader's Guide No. 1, *A Five-Day Program Design*.

SUGGESTED READING

Bellman, Geoffrey. "Surveying Your Supervisory Training Needs." *Training and Development Journal* (February 1975).

Brown, Gerald, and Wedel, Kenneth R. *Assessing Training Needs*. Washington, D.C.: National Training and Development Service Press, 1974.

Cotton, Chester, and Fraser, Richard. "On-the-Job Career Planning: One Organization's Approach." *Training and Development Journal* (February 1978).

De Cotiis, Thomas, and Morano, Richard. "Applying Job Analysis to Training." *Training and Development Journal* (July 1977).

Fordyce, Jack, and Weil, Raymond. *Managing with People: A Manager's Handbook of Organization Development Methods*. Reading, Massachusetts: Addison-Wesley Publishing Co., 1971.

Kirkpatrick, Donald. "Determining Training Needs: Four Simple and Effective Approaches." *Training and Development Journal* (February 1977).

Laird, Dugan. "Something Many Trainers Still Neglect: Responding to Individual Training Needs." *Training* (June 1978).

Leonard, Edward C. *Assessment of Training Needs*. Bloomington, Indiana: Midwest Intergovernmental Training Committee, 1974.

Mager, Robert, and Pipe, Peter. *Analyzing Performance Problems or You Really Oughta Wanna*. Belmont, California: Fearon Publishers, Inc., 1970.

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Sperry, Len et al. *You Can Make It Happen: A Guide to Self-Actualization and Organizational Change*. Reading, Massachusetts: Addison-Wesley Publishing Co., 1977.

Steele, Fritz, and Jenks, Stephen. *The Feel of the Work Place: Understanding and Improving Organization Climate*. Reading, Massachusetts: Addison-Wesley Publishing Co., 1976.

TRAINING OF TRAINERS

GUIDE NO. 2

ASSESSING TRAINING NEEDS

Participant's Sourcebook

by F. Gerald Brown

National Training and Development Service
for State and Local Government
Trainer's Resource Service

34

TRAINING NEEDS ASSESSMENT INSTRUMENT

INDIVIDUAL LEVEL

1. Name ______________________________

2. Position ______________________________

3. For me this program is:

   ______ Training for present position.

   ______ Preparation for advancement to another position.

   ______ Long-term career development.

4. My target position is (the one for which I am preparing):

5. I expect to occupy that position (at what point in time):

6. In that position my responsibility to the organization will be:

7. I will be expected to perform the following tasks:

8. To perform these tasks I will need the following knowledge, skills, and attitudes:

9. Copy the final list from question 8 here. Place an "X" in the appropriate column to indicate which knowledge, skills, and attitudes you believe you have and those that need further development.

	Have	Need

10. Review the areas of need in question 9. Group and rank them in order of priority. List alternative means of meeting the needs.

11. State your proposed learning experiences for the next five years, scheduled by year.

19 ___	19 ___	19 ___	19 ___	19 ___

12. State your learning plan for the coming year.

INTERVIEW QUESTIONNAIRE

ORGANIZATIONAL LEVEL

This is a relatively simple interview study using open-ended questions. The interviewer should encourage comments on positive and negative conditions. Interviewees may answer the basic questions for themselves, for subordinates, for peers, or for superiors.

Sample Questions

1. What affects your ability to do your job?

2. What affects your willingness to do your job?

3. What are the major overall objectives of the department?

4. Who is involved in establishing the objectives?

5. Have there been any significant changes in objectives in the last two to three years?

6. In terms of achieving these objectives, what assets does ______ have? What things help ______ to be successful?

7. What is the most important reason why ______ has been successful to date?

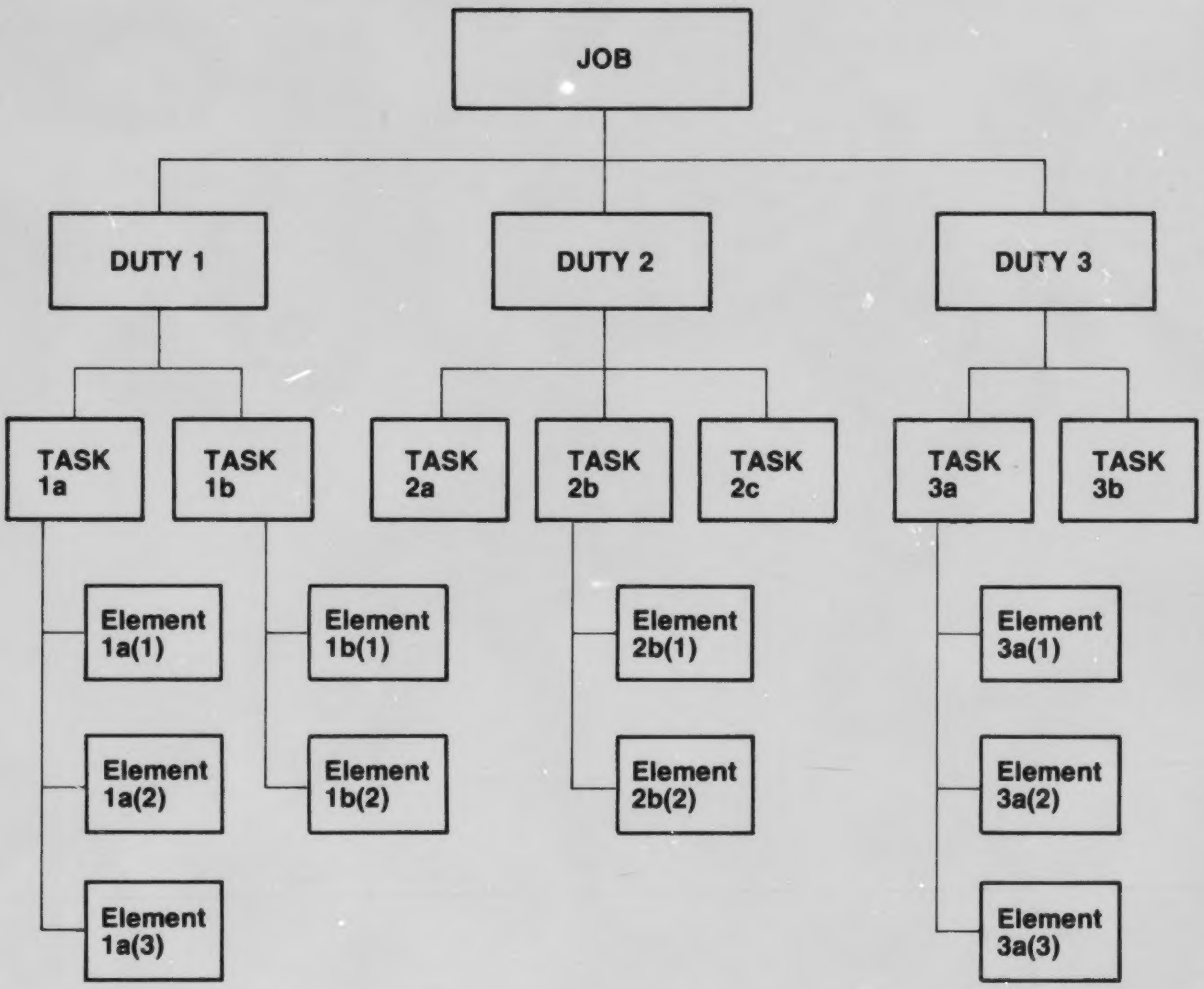
8. Again, in terms of the ______ objectives, what are the present obstacles or liabilities to achieving these objectives?

9. Which are the most important objectives? Obstacles?

10. What conditions have an important influence on either your *ability* or your *willingness* (enthusiasm) for doing your job?

(Strive for both positive and negative responses; probe for generality.)

INTERRELATIONSHIPS OF JOB, DUTIES, TASKS, AND ELEMENTS



ANALYSIS: JOB OF GOVERNMENT TRAINING OFFICER

From your own experience in the training field:

1. Write a valid list of tasks and task elements that make up the job of government training officers and/or employee development specialists.
2. Specify:
    - Conditions under which each task and task element must be performed.
    - Cues that initiate performance of the task and task element.
    - Standards to which each task element must be performed.
    - Details of how each task is performed.
3. Indicate whether each task and task element is a training need.

TASK QUESTIONNAIRE FOR GOVERNMENT TRAINING OFFICER PROFILE

1. What kinds of people will be doing this type of job? (Give a brief description of background, experience, and present job responsibilities.)

   ____

   ____

   ____

2. How many people will be doing the job (in each department)?

   ____

3. Where will they be located (organizationally, physically, or geographically, if the latter is important)?

   ____

   ____

4. What major duties does the job include?

   1. ______________________________
   2. ______________________________
   3. ______________________________
   4. ______________________________
   5. ______________________________
   6. ______________________________
   7. ______________________________
   8. ______________________________
   9. ______________________________
   10. ______________________________

(Continued)

For each major duty specified on the previous page, please write a task description in performance terms. The task description will be written in the same manner as your terminal objective.

Duty No. ________

Task Descriptions:

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

(Please use extra sheets of paper for additional task descriptions.)

(Continued on next page)

For each task description written on the previous page (and extra pages), please give the following information: What task (or work) elements make up the task?* In what order must they be performed? What are the conditions under which they will be performed? What are the performance standards?

Task No. ________

Task Elements:

1. Conditions: ____

____

____

Performance Standards: ____

____

____

Is there a training need?

Yes ______ No ______

2. Conditions: ____

____

____

Performance Standards: ____

____

____

Is there a training need?

Yes ______ No ______

---

*Use as many conditions and performance standards as are necessary to list the task elements.

GLOSSARY

JOB. The duties and tasks performed by a single worker constitute the individual's job.

DUTY. A duty is one of the major subdivisions of work performed by one individual. A job is made up of one or more *duties*.

Characteristics of duties:

1. A duty is one of the job holder's main functions.
2. A duty is a grouping of closely related tasks.
3. Duty requirements often are the basis for initial assignment to a job and for determining qualifications required to perform the job.

The duty title serves to clearly identify closely related groups of tasks.

TASK. A task is the lowest level of behavior in a job that describes the performance of a meaningful function in the job under consideration.

Characteristics of tasks:

1. A task statement describes a highly specific action.
2. A task has a definite beginning and end.
3. Tasks are performed in relatively short periods of time (i.e., seconds, minutes, or hours; rarely days, weeks, months, or years).
4. A task must be measurable; that is, it can be observed and assessed whether the task has been properly performed.
5. Each task is independent of other actions.

TRAINING OF TRAINERS

GUIDE NO. 3

DESIGNING AND CONDUCTING TRAINING PROGRAMS

Leader's Guide

by David W. Tees

**National Training and Development Service
for State and Local Government**
Trainer's Resource Service

44

THE AUTHOR

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DESIGNING AND CONDUCTING TRAINING PROGRAMS

Effective training begins with assessing training needs. Once these needs are identified, it is the trainer's task to design and deliver a training program to meet these needs. Therefore, trainers must possess the skill to design appropriate training programs, as well as be sensitive to the individual needs of those to be trained.

This session allows participants to examine a wide array of learning theories, models, and practices and to apply these ideas to a training design of their own choosing. It also allows some of them to experiment with the facilitator role.

TRAINING PROGRAM DESIGN

This part of the workshop examines what trainers need to know to design and implement programs that facilitate learning. In program design, five areas of trainer competency are reviewed. These include:

1. Understanding the behavior of adult learners.
2. Creating learning environments that are supportive and stimulating.
3. Formulating learning results that reflect program objectives and individual expectations.
4. Selecting and sequencing learning activities to achieve planned results.
5. Facilitating on-the-job application of learning.

LEARNING OBJECTIVES

There are eight specific objectives in the learning process:

1. To explain why adults learn differently and why it is important for trainers to understand these differences.
2. To describe four styles of learning and how adults learn best from different sources.
3. To describe five areas of individual learning preference and explain what a trainer might do to increase learner flexibility in each case.
4. To give one or more examples of what a trainer might do in the classroom to:
   - Promote psychological support for learning.
   - Promote physiological support for learning.
   - Encourage individual well-being and free expression.
5. To explain the five possible results of any learning experience.
6. To prepare and present a learning design worksheet that includes learning results, an appropriate balance of learning activities, and a strategy for sequencing activities to achieve planned results.
7. To describe four methods for facilitating learning transfer.
8. To cooperate with members of a facilitator team in providing leadership for a specific learning activity.*

The training activities planned for achieving these eight objectives require nine hours of lecture, discussion, and exercise work in the classroom for all workshop participants. An additional 10 hours for planning and conducting the training lab are required for those participants who select this training lab option.

PREREADING ASSIGNMENT

Knowles, Malcolm, *The Modern Practice of Adult Education* (New York: Association Press, 1970), pp. 37-54. Copies of this reference should be made available to workshop participants at least one day prior to this session.

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*This objective applies only to those participants who select this training lab.

DESIGNING AND CONDUCTING TRAINING PROGRAMS

Time **Activity**

8:30 a.m. (15 minutes) **Orientation**

This session is designed to give participants an overview of the subject matter to be discussed. This includes:

- Content to be covered.
- Structure and schedule of the session.
- Review of learning objectives.

You will find it helpful to write these objectives on newsprint and post them in advance or prepare a handout for participants.

8:45 a.m. (45 minutes) **Adult Learning and Learning Styles**

This session is designed to acquaint participants with the basic elements of adult learning theory (i.e., why and how adults learn differently).

1. Provide a definition of adult learning. For example, adult learning is:

   A process by which an individual invests energy in making use of available resources to acquire new knowledge, skills, or attitudes that are seen as relevant to personal needs and goals.

2. Discuss the various types of adult learners and why each learns differently. Review four characteristics of adult learners, including:
   - *Self-directed*—They want to decide for themselves what is most important to learn.
   - *Experience-based*—They identify with what they have learned from life.
   - *Role-motivated*—They learn what is important to be happy and productive at their present stage of life.
   - *Problem-centered*—They respond to learning that is relevant to real-life problems.

   Provide examples to illustrate each characteristic, or ask participants to do so.

3. Describe four characteristic styles of learning and the learning sources preferred by individuals with each style, including:
   - *Applyers,* who learn most effectively from self-analysis exercises, performance contracts, application projects, and checklists.
   - *Observers,* who learn most effectively from examples, demonstrations, films, and audiotapes.
   - *Experimenters,* who learn most effectively from games, role playing, exercises, videotapes, and case studies.
   - *Thinkers,* who learn most effectively from books, lectures, articles, audiotapes, and discussions.

4. Describe five classroom learning situations and what a learner might require from each of them. These include:
   - Structure versus free form.
   - Trainer versus learner managed.
   - Much expert versus little expert input.
   - External versus internal feedback.
   - Group versus independent work.

   Explain how the trainer might identify individual needs that vary from the norms of a group. Also, discuss how to provide options within a given learning situation. For example:
   - *Structure*—Organize materials and presentation, but create subgroups so individuals can work on learning issues in their own way.
   - *Trainer Managed*—Ask individuals to set their own goals, but suggest follow-through ideas for those who need encouragement.

- *Expert Input*—Schedule optional sessions to give participants the opportunity to confer with the experts.
- *External Feedback*—Provide checklists and tests for participants who want to measure their progress.
- *Independent Work*—Set aside time for participants who want to reflect or need to work alone.

Ask participants to identify with one or more of the specialized learning situations discussed. Encourage them to share their personal needs for special treatment and explain how these needs might be met in a workshop setting.

5. Emphasize the need for a trainer to recognize the differences in adult learners and why it is important to provide a mix of resources and techniques when designing a training session.

9:30 a.m.
(75 minutes)

Learning Style Inventory

This session is designed to help participants discover how they learn best, as well as to identify those learning situations and resources that are most helpful.

1. Describe the *Learning Style Inventory* (LSI) and what it measures (see page 3-12).
2. Discuss the *Experiential Learning Model* on which the LSI is based, including a description of the four dominating learning styles (see page 3-13).
3. Distribute copies of the *LSI Questionnaire* and self-scoring sheet (see page 3-14). Read aloud the instructions for completing the questionnaire while participants read along silently. Inform participants that they have 10 minutes to complete the questionnaire.

   When the 10 minutes are up, read the scoring instructions with participants and ask them to enter their scores at the bottom of their questionnaires.

   You may want to distribute the scoring instructions separately if you think they will influence the participants' work.
4. Ask participants to plot their LSI scores on the *Learning Style Grid* and to print their initials next to their score (see page 3-16).
5. Ask participants to discuss their scores in relation to the four learning style profiles. Questions to encourage discussion include:
   - Were you surprised by your score?
   - Why?
   - What have you discovered about facilitating learning from your experience with the LSI?

10:45 a.m.
(15 minutes)

Break

11:00 a.m.
(60 minutes)

Role of the Trainer as Facilitator

This session is designed to help participants identify those facilitator behaviors that help people learn and those that hinder learning.

1. Discuss the role of the trainer. For example:

   The role of the trainer is to provide educational experiences and a climate for learning that is consistent with the personal and organizational goals of those who are participating in the learning process.
2. Ask participants to form small discussion groups and to answer the following questions:
   - What have you seen a trainer do that helped a learning group?
   - What have you seen a trainer do that hindered a learning group?

The groups should make a list of their answers. After 10 minutes of discussion, each group is asked to report its findings. Record findings on a flip chart and tape the sheets to the wall. Ask participants to comment.

3. Describe briefly what a trainer can do to create a learning environment that is both comfortable and stimulating (see page 3-17).

12:00 noon **Lunch**

1:00 p.m. (60 minutes) **Designing Effective Learning Experiences**

This session is designed to explain to participants why the trainer must have a clear picture of what people want to learn, what is possible to achieve in a workshop setting, and what strategies and learning resources must be mastered to achieve intended results.

In designing a training program, a trainer must first determine the most important learning result to achieve. This is followed by selecting those learning sources that will best achieve the intended result, and by sequencing activities to ensure an effective learning experience.

1. Describe the five possible results of any learning experience. These include:
   - A cognitive result (knowledge).
   - A behavioral result (skill development).
   - An effective result (change in values).
   - A creative result (a spin-off idea).
   - No result.

Illustrate each outcome with an example. For instance, five individual learners in a workshop on writing job objectives might experience these different learning results:

- *Cognitive Result*—Learner #1 memorizes the guidelines for writing objectives.
- *Behavioral Result*—Learner #2 decides to prepare objectives for the work unit.
- *Affective Result*—Learner #3 begins to accept the idea that objectives are an important feature of successful work planning.
- *Creative Result*—Learner #4 sees a related way to use objectives to help in personal career planning.
- *No Result*—Learner #5 listens, but learns nothing.

Explain that since different results are possible from the same experience, it is important for the trainer to know which is most important and to plan a program to achieve it. (For example, if the objective is for participants to be able to solve problems more effectively, and they are taught steps in problem-solving but not given a chance to practice *applying* what they have learned, they may still be unable to solve problems more effectively when they return to the job. Clearly, it does little good to help people achieve cognitive learning when they need a behavioral result.)

2. Explain that once the trainer has decided on the most important results, the next step is to design a program to achieve them. Discuss appropriate learning sources and activities (see page 3-18).

   In describing the merit of selecting various sources, it is helpful to point out that:

   - To help people *understand* something, it is necessary to:
     - —Review key points.
     - —Use examples.
     - —Restate new ideas using familiar words.
   - To help people *do something new*, it is necessary to:
     - —Arrange for practice using the new skill.
     - —Furnish positive and negative models.
     - —Provide feedback as reinforcement.
   - To encourage people to *change their values*, it is necessary to:
     - —Clarify old versus new values.
     - —Arrange opportunities to experiment with new values.
     - —Provide reinforcing links to solidify change over time.
   - To help people be more *creative*, it is necessary to:
     - —Suggest new mind sets (relate a familiar concept to a different situation).

—Provide methods for recording creative ideas.

—Reward creativity.

3. Explain to participants that the sequence of activities in a training program is as important as its substance. The trainer must be concerned with more than an orderly presentation. For example, beginning a session with a game may be desirable to build interest in a subject. Or, an enjoyable activity might be provided following a heavy lecture session.
4. Review three alternate sequencing possibilities (see page 3-19).
5. Distribute the *Sample Worksheet for Planning Training Programs* (see page 3-20). This session illustrates an approach a trainer might use to structure a learning experience, including desired learning results, planned activities, and a coding system to encourage attention to sequencing considerations. Review the handout and ask for questions and comments.

2:00 p.m.
(15 minutes) **Break**

2:15 p.m.
(2 hours) **Exercise in Effective Training Design**

This session is designed to give participants the opportunity to apply their newly acquired knowledge in training program design. The exercise requires that they prepare a sample worksheet for a training program, using the previous handout as a guide.

1. Ask participants to work individually on the design of a training program that they have already conducted or are planning to develop for future use. Suggest that they transfer their final design to newsprint sheets. (Allow them 45 minutes to complete this task.)
2. Ask participants to briefly describe the training programs they have designed (about 30 minutes).
3. Following the reports, ask participants to form teams with others who are working on similar training program designs to share ideas and suggestions (about 30 minutes).
4. After completing the exercise, ask participants to comment on the experience and their progress in preparing effective training designs (about 15 minutes).

4:15 p.m.
(30 minutes) **Facilitating Learning Transfer**

This session is designed to explain the role of the facilitator in transferring learning from the classroom to daily life.

1. Explain that what individuals do with their learning is their own responsibility. However, the facilitator can help the transfer process by:
   - Helping learners identify ways to apply what they are learning.
   - Helping learners develop plans to implement their application strategies.
   - Helping learners consider possible obstacles to implementation and what to do about them.
2. Describe four techniques that a trainer can use to facilitate learning transfer (see page 3-21).

4:45 p.m.
(15 minutes) **Conclusion and Review**

Review the objectives of the day's session. Ask participants to comment on the usefulness of the material presented.

5:00 p.m. **Workshop Adjourns**

CONDUCTING TRAINING PROGRAMS

ON-SITE TRAINING LAB

The purpose of this training lab is to provide an opportunity for participants to plan and conduct a one-day session for supervisors in a public agency.

Participants in this training lab will conduct the program entitled, "Planning and Setting Objectives: A Training Program for Local Government Supervisors."* The *Facilitator's Guide* can be found in the Appendix to this guide. All participants in this lab should receive a copy of this guide as soon as possible in order to begin planning its presentation.

It will be necessary to secure the cooperation of appropriate public agency officials in advance of the workshop. This should include briefing them on the mutual benefit of their participation and the desirability of preselecting supervisors from various departments who have needs and interests that correspond to the specific learning content of this program.

Time	Activity
(3 hours)	**Training Lab (Preplanning)** Participants who have selected this training lab as their field option should meet as a team with a designated staff trainer to: • Meet with the representative of the public agency in order to be briefed on trainee backgrounds, job assignments, skill levels, and learning needs. • Review the entire learning package and determine how each trainer can add to the learning value of the overall experience. For example, the group can review what trainees have already learned, cover the objectives planned for the new activity, and conclude by reviewing what has been discussed and what is to happen next. • Determine individual training roles and assignments and schedule time for additional practice. • Inventory the equipment, supplies, and handouts to be sure everything is ready for the training lab.** • Confirm the times, locations, and other logistical details, and prepare any newsprint materials or special handouts. Do this well in advance. Note: These meetings are to be scheduled outside regular workshop time and arranged among participants and the training staff.
10:00 a.m. the day of the training lab	**Training Lab (Performance)** Team members deliver the equipment, supplies, and other materials to the training site and set up the training room. Note: A separate seating area should be provided for those participants taking part in the Evaluation Training Lab.
10:30 a.m. (90 minutes)	After the trainees have arrived and are seated, one member of the lab team introduces the program to the supervisors and conducts a short introductory warm-up exercise. This is followed by a concept presentation using slides and cassettes as described in *The Facilitator's Guide*. Following a discussion of the presentation, another member of the team leads the trainees through a case study entitled "The Mayor's Memo."
12:00 noon	**Lunch**
1:00 p.m. (90 minutes)	Another member of the team continues the program by introducing the management simulation game, "Communication Tower Project." Handouts and tinker toy sets are required for this game. At the conclusion of the game, another team member leads the trainees in a discussion of implications using information from *The Facilitator's Guide*.
2:30 p.m. (15 minutes)	**Break**

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*This is a suggested training session. You may want to conduct a one-day program that would be of more practical use for the cooperating public agency.

**All equipment, materials, and supplies outlined in *The Facilitator's Guide* must be supplied by the workshop training staff or the cooperating public agency.

2:45 p.m. (75 minutes) Another team member leads the trainees in an application exercise using worksheets described in *The Facilitator's Guide.* At the conclusion of this activity, ask trainees to plan a back-home application plan. Following a review of the training session and its objectives, ask trainees to complete a reaction sheet.* They should also be asked for their verbal reactions and thanked for their participation.

4:30 p.m. **Training Lab Adjourns**

8:30 a.m. on the following day (45 minutes) **Training Lab (Critique)**

Participants meet as a group to share their training lab experiences and to prepare a report for the general critique session. A member of the training staff should join the group to encourage them to undertake the following tasks:

- Predict the overall rating assigned to the training activity by the trainees and the evaluation team.
- Determine a rating of its own.
- Explain how the rating was determined.
- Describe what the team did that was most helpful to the learning of participants and what was least helpful.
- List the principal learnings from the experience.

9:15 a.m. (90 minutes) **General Critique Session**

The Designing and Conducting Training Activities team joins the other two training lab teams for a general critique session. A representative from each team gives a report, not to exceed 20-25 minutes.

10:45 a.m. (15 minutes) **Break**

11:00 a.m. **Review and Evaluation Planning**

Follow the Review and Evaluation Planning agenda in Leader's Guide No. 1, *A Five-Day Program Design*.

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*This process is administered by the Training Evaluation team.

SUGGESTED READING

Bell, Chip. "Criteria for Selecting Instructional Strategies." *Training and Development Journal* (October 1977).

Bell, Chip, and Margolis, Frederic. "Blending Didactic and Experiential Learning Methods." *Training and Development Journal* (August 1978).

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Knowles, Malcolm. "Andragogy: An Emerging Technology for Adult Learning." *The Modern Practice of Adult Education: Andragogy vs. Pedagogy*. New York: Association Press, 1970.

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Mager, Robert. *Preparing Instructional Objectives*. 2nd ed. Belmont, California: Fearon Publishers, Inc., 1975.

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Nadler, Leonard. "Using Critical Events to Develop Training Programs." *Industrial Training International* (April 1971 and May 1971).

Newstrom, John. "Selecting Training Methodologies." *Training and Development Journal* (October 1975).

Pinto, Patrick, and Walker, James. *A Study of Professional Training and Development Roles and Competencies*. Madison, Wisconsin: American Society for Training and Development, 1977.

Tracey, William. *Designing Training and Development Systems*. New York: American Management Association, 1971.

TRAINING OF TRAINERS

GUIDE NO. 3

DESIGNING AND CONDUCTING TRAINING PROGRAMS

Participant's Sourcebook

by David W. Tees

National Training and Development Service
for State and Local Government
Trainer's Resource Service

LEARNING STYLE INVENTORY

The questionnaire you are asked to complete, the *Learning Style Inventory* (LSI), is intended to help you identify those learning situations and resources that are most useful to you. After you have completed and scored the questionnaire, we will discuss the learning theory on which it is based and the meaning of your individual scores.

An important movement in education today recognizes the critical role that experience plays in the learning process. Learning is conceived as a four-stage cycle: immediate concrete experience (CE), which provides a basis for reflective observation (RO), which can be formulated into a theory known as abstract generalization (AG), which can be stated through active experimentation (AE), which results in guides for creating new experiences and repetition of the cycle.

The effective learner, according to the theory, needs four different kinds of abilities. That is, the learner: (1) must be totally involved in an experience (CE); (2) must be able to reflect on and observe the experience from many perspectives (RO); (3) must be able to integrate personal observations into sound theories (AG); and (4) must be able to use the theories to make decisions and to solve problems (AE).

Because of heredity, experiences, and the demands of our present environment, each of us has developed a learning style that emphasizes some learning abilities over others. The *Learning Style Inventory* was developed by a research team at MIT to measure an individual's strengths and weaknesses as a learner. The LSI measures an individual's relative emphasis on each of the four learning characteristics: CE, RO, AG, and AE.

Further experimentation with the experiential learning model has led to the identification of four dominant learning styles. They are called: the diverger, the assimilator, the converger, and the accommodator.

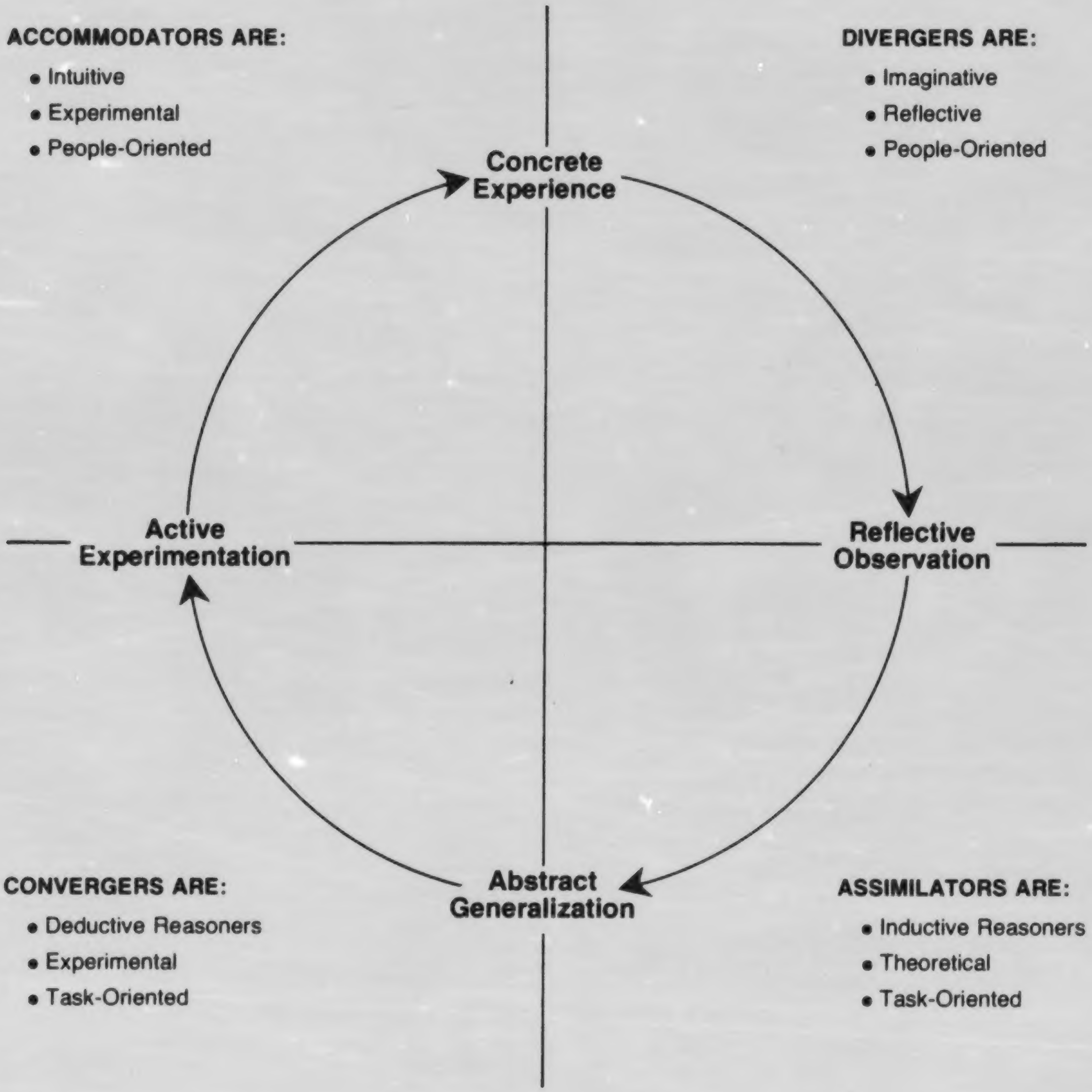
1. The diverger's greatest strength lies in viewing problems from many perspectives. Ideas can be generated in a short time and with a great deal of creative imagination. The diverger's shortcoming, however, is one of avoiding problem-solving situations or taking action unless forced to do so.

2. The assimilator excels at creating theoretical models by taking a few facts and fashioning them into a purposeful theory. Like the diverger, the assimilator is not interested in making practical use of theories, but only in being sure theories are logical and sound. The assimilator tends to think before acting, but may fail to act at all.

3. The converger is interested in the practical application of ideas to specific problems or situations. This individual seems to be most comfortable in situations where there is a single best way of doing things. The converger's biggest drawback is a rather narrow, single-minded approach.

4. The accommodator likes to get things done, carry out plans, take action, and become involved in new experiences. A risk-taker, the accommodator is willing to adapt readily to any situation; theories that do not fit the facts will be thrown out. The accommodator is impatient to act, and tends to act before thinking.

EXPERIENTIAL LEARNING MODEL



ACCOMMODATORS ARE:

- Intuitive
- Experimental
- People-Oriented

DIVERGERS ARE:

- Imaginative
- Reflective
- People-Oriented

CONVERGERS ARE:

- Deductive Reasoners
- Experimental
- Task-Oriented

ASSIMILATORS ARE:

- Inductive Reasoners
- Theoretical
- Task-Oriented

LEARNING STYLE INVENTORY QUESTIONNAIRE

This inventory is designed to assess your most preferred method of learning. As a reference point, consider a single experience in the last 6-12 months in which you learned a great deal. Examples of experiences you can use as a reference point are: (1) planning a major change in your agency's activities; (2) attending a professional meeting; and (3) interacting with new or established clients. The main point to remember in selecting the experience for completing this inventory is that the experience is fairly fresh in your mind and that you learned from it. As you take the inventory, rank *high* those words (on each line) that best characterize the way you learned and rank *low* the words that least characterize your learning style. It may be difficult to choose the words that best describe your learning style because there are no right or wrong answers. Different characteristics described in the inventory are equally good. The aim of the inventory is to describe how *you* learned in this experience.

ADMINISTRATION INSTRUCTIONS

Nine sets of four words are listed below. Rank order each set of four words, assigning a "4" to the word that best characterized your learning; a "3" to the word that next best characterized your learning; a "2" to the next most characteristic word; and a "1" to the word that least characterized your learning. *Be sure to assign a different rank number to each of the four words on each line. Do not make ties.*

1.	___**Involved**	___**Tentative**	___**Discriminating**	___**Practical**
2.	___**Receptive**	___**Impartial**	___**Analytical**	___**Relevant**
3.	___**Feeling**	___**Watching**	___**Thinking**	___**Doing**
4.	___**Accepting**	___**Aware**	___**Evaluative**	___**Risk-Taker**
5.	___**Intuitive**	___**Questioning**	___**Logical**	___**Productive**
6.	___**Concrete**	___**Observing**	___**Abstract**	___**Active**
7.	___**Present-Oriented**	___**Reflecting**	___**Future-Oriented**	___**Pragmatic**
8.	___**Open to New Experience**	___**Perceptive**	___**Intelligent**	___**Competent**
9.	___**Experience**	___**Observation**	___**Conceptualization**	___**Experimentation**
	___**CE234578**	___**RO136789**	___**AG234589**	___**AE136789**

Scoring Instructions

To score the inventory, add each vertical column, including only those words for which a number has been entered under the line for the total score. For example, for CE total the ranks for words 2, 3, 4, 5, 7, and 8 in the first column. For RO total the ranks for words 1, 3, 6, 7, 8, and 9 in the second column, and so on. To get the combination scores, subtract CE from AG and RO from AE. Preserve negative signs if they appear.

___**CE234578**

___**RO136789**

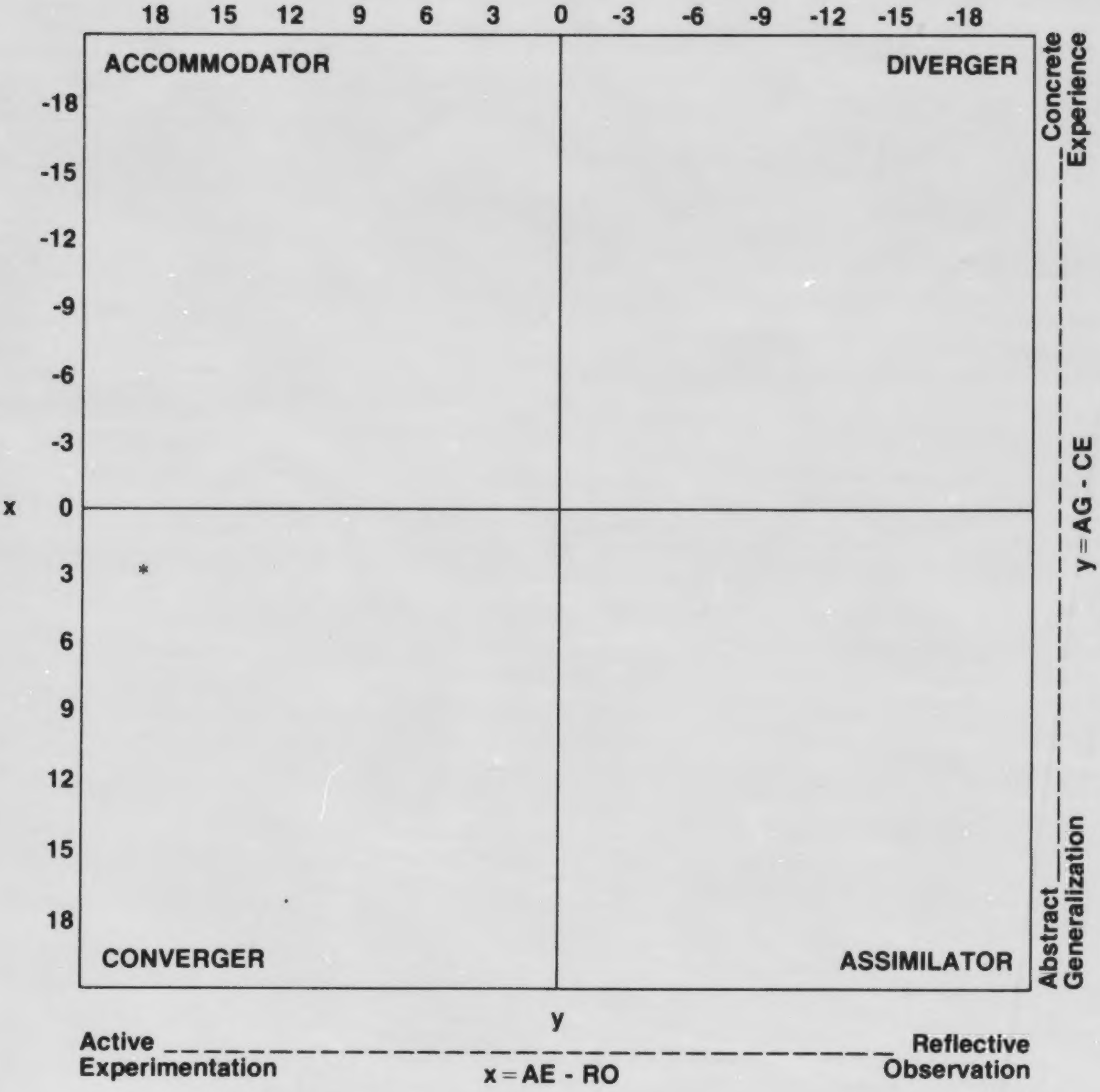
___**AG234589**

___**AE136789**

______**AG - CE**

______**AE - RO**

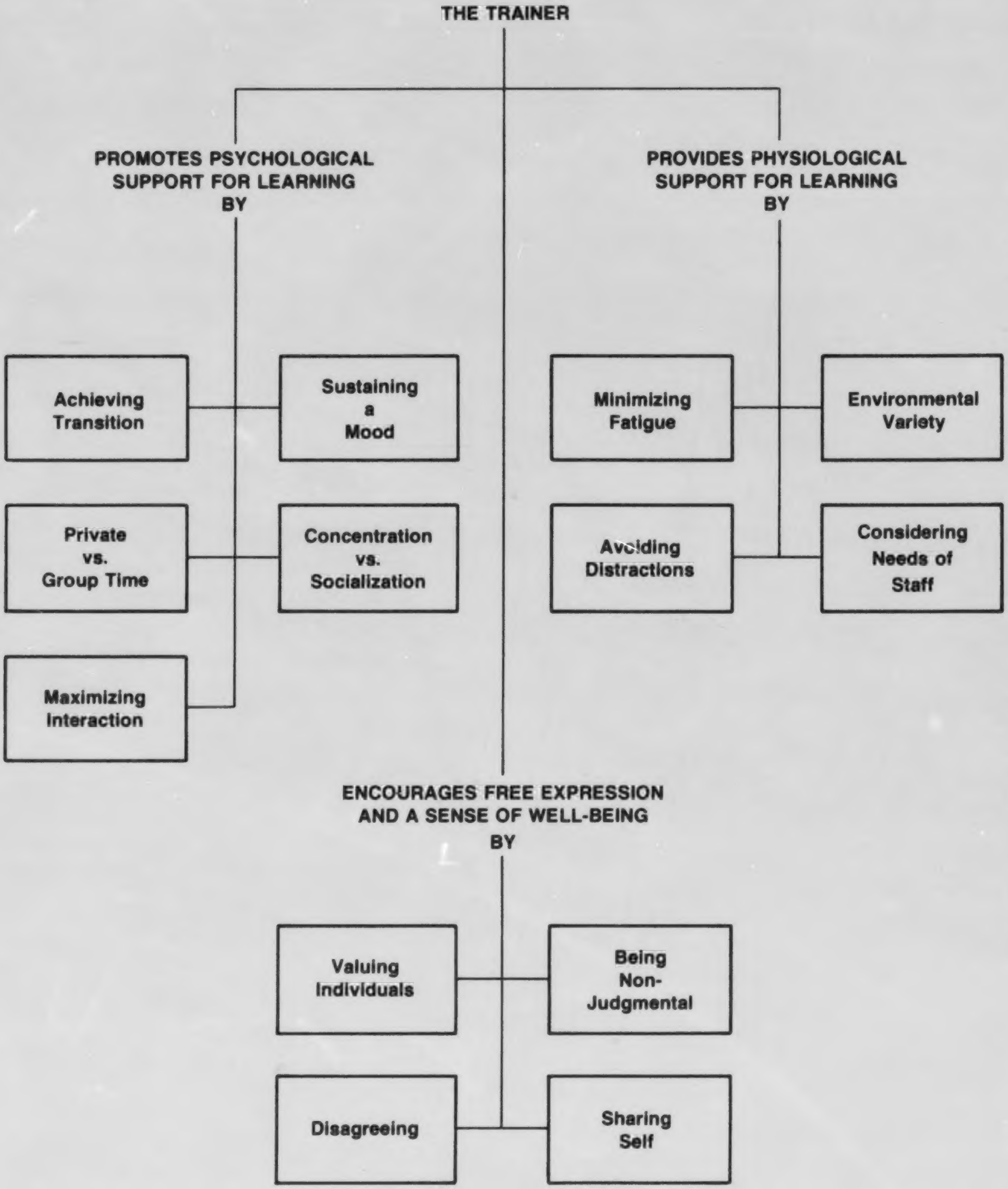
LEARNING STYLE GRID



(Enter the AE - RO score on the horizontal line.)
(Enter the AG - CE score on the vertical line.)

******Example:** If your AE - RO score is +18 and your AG - CE score is +3, you would plot yourself at the asterisk.

FACTORS IN BUILDING A LEARNING COMMUNITY



SOURCES TO USE FOR DESIRED RESULTS

IF YOU WANT PEOPLE TO UNDERSTAND SOMETHING, FURNISH THEM WITH INFORMATION

USING

- Articles
- Lectures
- Diagrams
- Audiotapes
- Programmed Instruction

IF YOU WANT PEOPLE TO BE ABLE TO DO SOMETHING, HELP THEM EXPERIMENT WITH IT

USING

- Case Studies
- Demonstrations
- Role Playing
- Videotapes
- Exercises
- Worksheets

IF YOU WANT PEOPLE TO CHANGE THEIR VALUES AND PRIORITIES, ASSIST THEM TO INQUIRE AND OBSERVE THE OLD VERSUS THE NEW

USING

- Instruments
- Role Playing
- Films
- Structured Games
- Exercises
- Self-Analysis

IF YOU WANT PEOPLE TO DEVELOP A CAPACITY FOR CREATIVITY, LET THEM EXPERIENCE INNOVATION

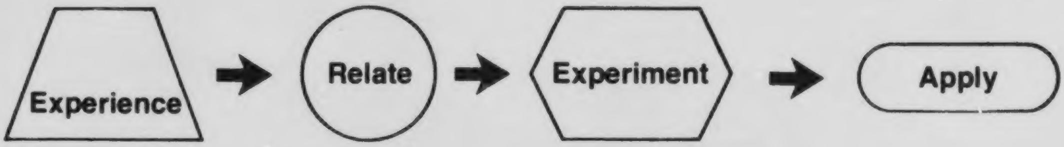
USING

- Brainstorming
- Mental Acuity Exercises
- Unstructured Games
- Self-Analysis

QUESTIONS IN SEQUENCING TRAINING ACTIVITIES

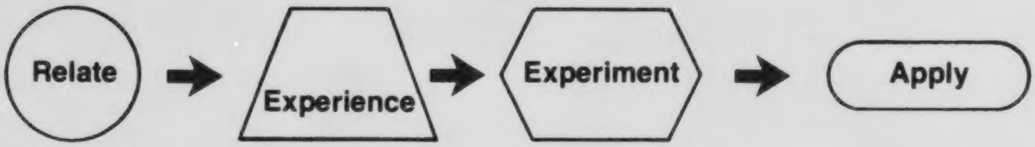
1. What is the most *logical* sequence for organizing training activities?

SEQUENCE A



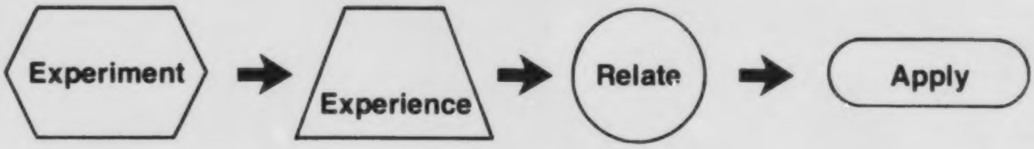
2. What activities are the most *interesting* or *important* to learners?

ALTERNATE SEQUENCE B



3. What activities will learners find the most *enjoyable?*

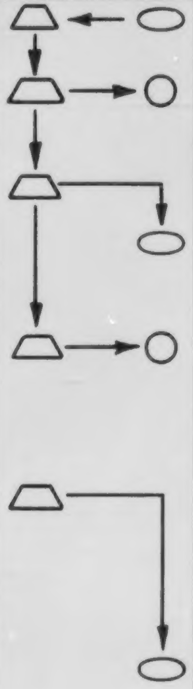
ALTERNATE SEQUENCE C



SAMPLE WORKSHEET FOR PLANNING TRAINING PROGRAMS

TOPIC: LEARNING CHARACTERISTICS OF ADULT LEARNERS

TOTAL TIME: 90 MINUTES

LEARNING RESULT	TYPE CODE*	PLANNED ACTIVITY	ACTIVITY SEQUENCE**	TIME
1. Define "learning."	K	Ask participants for their definitions of learning; provide a definition.		10 minutes
2. Describe five things that characterize adult learners.	K	Describe the five characteristics using an example for each taken from day-to-day experience.		20 minutes
3. Describe how adult learners differ in the way they learn.	S	Describe sources of learning and preferred learning conditions. After each description, ask participants to identify with one of the alternatives and how they knew which one was right for them.		20 minutes
4. Define "value" and describe the influence of values on what a person will learn.	K	Explain values, their influence on learning, and why clarification of values is important at the start of a learning experience. Use the opening session of this program as an example.		10 minutes
5. Discover the way you learn best and how others differ from you in learning styles.	S	Explain the theory underlying the LSI, review individual scores plotted on a master grid, and ask participants to react to their own profiles and the instrument generally.		30 minutes
6. Value the importance of human differences in facilitating learning in others.	A	See 3, 4, and 5 above.		

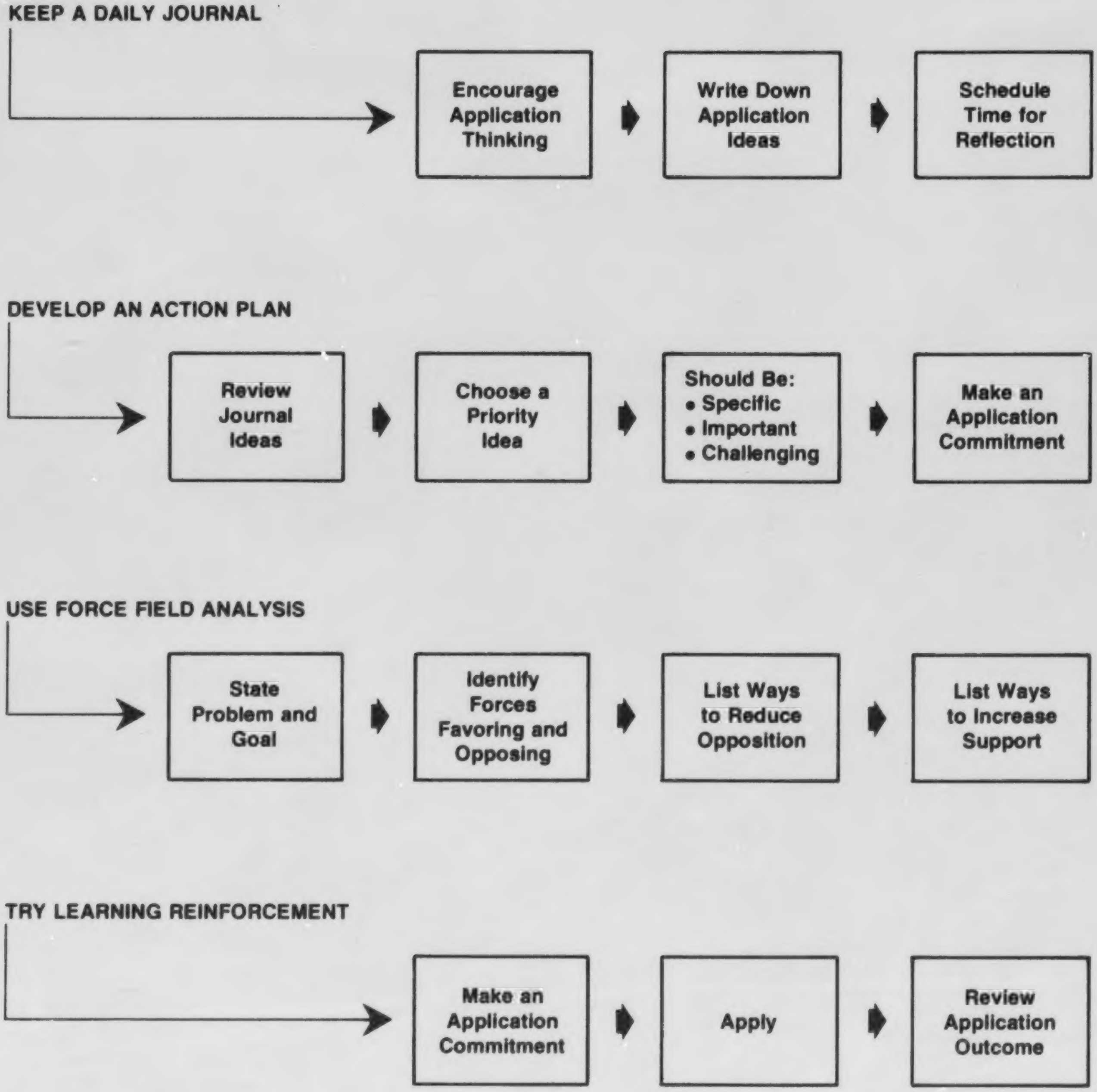
***Learning Results (Type) Code:**

K = Know or understand that . . . .
S = Skill or being able to . . . .
A = Attitude or value change . . . .

****Activity Sequence Code:**

⏢ = Content material
○ = Experienced-based example
⬭ = Learning application activity
⬡ = Simulation

FOUR WAYS TO FACILITATE LEARNING TRANSFER


KEEP A DAILY JOURNAL
Encourage Application Thinking
Write Down Application Ideas
Schedule Time for Reflection
DEVELOP AN ACTION PLAN
Review Journal Ideas
Choose a Priority Idea
Should Be:
• Specific
• Important
• Challenging
Make an Application Commitment
USE FORCE FIELD ANALYSIS
State Problem and Goal
Identify Forces Favoring and Opposing
List Ways to Reduce Opposition
List Ways to Increase Support
TRY LEARNING REINFORCEMENT
Make an Application Commitment
Apply
Review Application Outcome

PLANNING AND SETTING OBJECTIVES:
A TRAINING PROGRAM FOR LOCAL GOVERNMENT SUPERVISORS

A Facilitator's Guide

This guide has been compiled from materials developed by the Institute of Public Affairs, the University of Iowa, for a training program on supervisory functions and has been revised with their permission.

PURPOSE

Supervisors who attend this program will be able to use work planning methods to improve their performance on the job. The program is designed for a class of 20 people and requires about four contact hours.

CONTENT

1. *Get Acquainted Activity* (15 minutes)
    - Small groups.
2. *Lecture—“Planning and Setting Objectives”* (30 minutes)
    - Slide and tape program.
    - Discussion.
3. *Case Study—“The Mayor's Memo”* (45 minutes)
    - Small group task.
    - Discussion.
4. *Individual and Small Group Task—“Writing Objectives”* (30 minutes)
    - Individual task.
    - Discussion.

Break (15 minutes)

5. *Management Simulation Game—“Communication Tower Project”* (15 minutes)
    - Small group task.
    - Discussion.
6. *Closing—“Application Plans and Evaluation”* (30 minutes)
    - Individual plans.
    - Discussion.
    - Written evaluation.

Adjourn

ROLE OF THE TRAINER

As the trainer, your primary role is to be a facilitator of the learning process. This involves stimulating the participants' interest in the course, encouraging them to become actively involved in the learning process, guiding them through learning experiences, and creating a climate for learning. Such a climate is informal, friendly, supportive, stimulating, and challenging.

You will want to become very familiar with the concept material, but it is not necessary that you know all the answers to all the questions that arise. It is often an effective teaching technique to turn a question over to the group even if you believe you do have an answer.

If your attitude is “Let's explore together and learn from each other,” it will encourage members of the group to share the responsibility of their own learning and to contribute to the learning of the group. Without this shared responsibility, it is very easy for members of a group to become overly dependent upon you as the subject matter expert, to wait passively, and to expect you to pour knowledge and wisdom into their heads. Usually, very little real learning occurs under these circumstances.

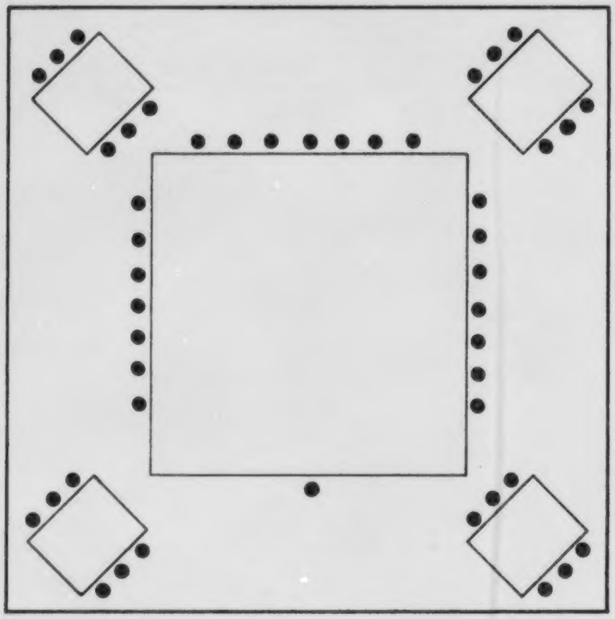
FACILITIES AND EQUIPMENT

1. *Meeting Room*

You will need a meeting room that provides for the following:

- A seating arrangement in which all participants can hear and see each other face-to-face.
- Surface areas (preferably tables) on which participants can write.

- A method for darkening the room for the slide and tape presentations.
- Three or four extra work tables for small group activities.



2. *Equipment and Supplies*

The following equipment and supplies will be needed for *each* session:

- Carousel slide projector.
- Cassette tape player (it is highly recommended that you use a slide-synch machine that is synched to 1,000 hertz, such as Wollensak models 2575, 2570, or 2550).
- Slides in carousel and cassette—"Planning and Setting Objectives." (This presentation is available from the University of Iowa, Institute of Public Affairs.)
- Screen.
- Easel and newsprint or blackboards, or both.
- Felt-tip pens (several colors).
- Masking tape.
- Ruled pad and pencil for each participant.
- Handouts, one per participant, including:
  —"The Mayor's Memo."
  —"Guidelines for Writing Objectives."
  —"Worksheet: Writing Objectives."
  —"Communication Tower Project."
  —"Application Ideas."
  —"Evaluation Questionnaire."

3. *Additional Materials for the Management Simulation Game*

- Three 350-piece sets of Tinker Toys.*
- Three 15-inch rulers.
- Clock or watch with a second hand.

ACTIVITIES

1. *Get Acquainted Activity* (15 minutes)

Ask the group to form pairs with someone in the group whom they do not know well. Give them 10 minutes to explore the following questions with each other:

(Write questions on newsprint for easy reference.)

- Name, position, and department.
- What's in it for you to be here today?
- What do you want to know about planning and setting objectives?

After pairs have had approximately 10 minutes, reconvene the group and ask them to introduce their partners.

Before starting the first learning activity, let participants know in general what to expect from the program. This includes reviewing the purpose and pointing out that the program will include the opportunity to:

- *Learn* new concepts.
- *Build* specific skills.
- *Experience* the impact of applying these concepts and skills.
- *Relate* these ideas and skills to their own jobs.
- *Plan* how they can use them back on the job.

2. *Lecture—"Planning and Setting Objectives"* (30 minutes)

Slide and Tape Presentation

Load and check the projector and player prior to this time so that you can begin the presentation without delay.

Group Questions and Discussion

Invite questions or reactions from the group. Use these, or questions of your own choosing, to stimulate discussion of the concepts presented in the lecture.

- What are the three principal components of the planning function mentioned in the lecture?
- What are some of the factors mentioned in the film that should be considered in writing objectives?

---

*Instructions for the Tinker Toy sets: The 350-piece set is the smallest set that can be purchased that has the 10-¾" purple pieces. This set has other pieces that are not used in constructing the Communication Tower and they should be removed from the sets. The pieces that should be removed include: unpainted 9" rods, plastic fins, and rubber bands.

- What are the differences between objectives for major continuing responsibilities and those for change or improvement?
- Are you presently operating with a clear set of objectives that are well known throughout your unit?
- How were these objectives developed and communicated? How was commitment to them secured?

Distribute the handout, "Guidelines for Writing Objectives" (page 3-26) and point out the written sample objectives. Ask if there are any questions or comments.

Learning Outcomes

Those who participate in this activity should be able to do the following:

- Explain the planning function and its three principal components.
- Name at least five factors to consider in writing objectives.
- Give an example of a continuing objective and an improvement objective that meet the guidelines presented in the lecture.

3. *Case Study—"The Mayor's Memo"* (45 minutes)

Form subgroups and distribute the handout, "The Mayor's Memo" (page 3-27) to participants. Tell the participants to read the case study, proceeding with the task as it is outlined on the last page. Instruct them to be prepared to share their product (part 5 of the task) with the entire group in 30 minutes. Distribute newsprint and felt-tip pens to each group so they can write their revision of the memo.

Reconvene the group when it is time for small group reports. Go through questions 1-4 in the task, asking a representative from a different group to respond each time. Members from other groups can add to the response of the group that answers first if they wish, but this gives each group a chance to be first in responding to at least one question. For question #5, ask subgroups to volunteer one at a time to post their memo and explain it, as necessary.

Learning Outcomes

Those who participate in this activity should be able to do the following:

- Explain what is wrong with the Mayor's memo.
- Explain the factors that should have been considered by the Mayor before writing the memo.
- Apply principles of good objective preparation in rewriting the memo.

4. *Individual and Small Group Task—"Writing Objectives"* (30 minutes)

Distribute the handout, "Worksheet: Writing Objectives" (page 3-29). As the group follows their copy, read aloud directions for completing the worksheet. Remind them of the guidelines and samples for writing objectives that were handed out earlier.

For Step 1, explain that the overall purpose of their department, division, or unit is the reason why their department, division, or unit exists. This task can be worked on individually or in a small group if there are several persons from the same work unit in the class. In the latter case, suggest that they may want to first jot down their ideas individually and then share them with the group.

Whether participants work individually or in small groups, after they have written some objectives ask them to show their efforts to another participant for comments and suggestions. Point out that it is helpful to check the other person's objectives against the guidelines.

After participants have critiqued each other's objectives and have revised their own objectives accordingly (about 20 minutes), urge those who are willing to write one of their objectives on newsprint that you have posted around the room. If most participants have done this task in subgroups, ask those groups to select two objectives from among those written by group members to post for the whole group to examine.

Ask each person who posted an objective to read their purpose statement to the group. Invite group comments on the relationship of the objective to the purpose statement (is it supportive?) and on the extent to which the objective follows the guidelines for writing objectives.

Learning Outcome

Those who participate in this activity should be able to write objectives for their own work environments that conform with principles of good objective writing.

5. *Management Simulation Game—"Communication Tower Project"* (75 minutes)

Explain that this activity will provide the opportunity to experience the application of some of the concepts that they have been discussing.

Directions

Divide the group into three teams and assign each team a project area (one of the break-out tables if these are available). Otherwise, separate the teams as much as possible and move tables and chairs so that each team will have its own work table.

Distribute the handout, "Communication Tower Project" (page 3-30) with instructions (one per person) and a set of tinker toys to each team. Read the instructions aloud as the teams follow along. Briefly explain what sort of information is on the other pages, but let the teams read those pages in detail for themselves.

Emphasize that each team must fill out the top of page 3-32 and the Tower Estimate (Budget) column in the middle of the page before they begin the construction phase. You will collect one completed copy of that sheet from each team before the construction phase begins. They will retain the other copies.

Tell the teams how long they will have for the planning phase (at least 45 minutes). Show them the book that will be used to test the tower's strength. Tell the teams the planning phase is beginning at this point. Alert the teams when one-half of the planning time is gone. When about 10 minutes remain, begin checking with the teams to see that they are filling out page 3-32. Assist them as needed.

Instruct teams to notify you as soon as their tower is completed to their satisfaction. Announce the beginning of the construction phase (ready, set, go!). You will need to time the construction phase carefully, recording to the nearest half-minute the amount of time that each team takes. Test each tower with the book as described in the instructions.

After all teams are finished, ask them to complete the remainder of page 3-32. When teams have finished their computations, collect tower height and cost effectiveness ratio information from them. Post this up front along with the various construction times. The team with the highest ratio is the winner.

Discussion of the Exercise

Reconvene the group to discuss their experiences. Some questions to explore are:

- Did the teams formulate an objective? (Some will, some will not. You can look these over yourself after the teams turn page 3-32 in to you.) Were their objectives specific, realistic, complete, and internally consistent? What were their unstated objectives?
- Did any teams earn the bonus? Incur the penalty? Explain that the bonus and penalty features are to emphasize the importance of estimating accurately. The bonus provision illustrates that sometimes too much success can hurt if it has not been planned for. (If a team has *more* than 10 percent under [or over] its budgeted costs, it did not earn the bonus.) Compare team results to what can happen if a public program receives much more favorable response than has been planned for and cannot handle the demand. (It can suffer from too much success.)
- Did the teams use all three components of planning in preparing to construct the tower? Did they formulate an objective, and was it clarified and understood by all members of the team? Did they inventory their resources to be sure they were adequate to meet their objective? And, did they make a decision concerning how the resources would be used to accomplish the objective?
- How were the resources of the group assessed? Was an inventory made of resources available? Was time taken into account as a resource? Did they make good use of their human resources? (For example, did the group try to discover if there were persons in the team who were quick with mathematical computations or experienced with engineering or design? Was there balanced participation of team members?)
- Did teams do any checking or testing along the way about whether they were on target toward their objective—such things as checking for stability of their tower design or whether the height of their tower was turning out as they planned?

Learning Outcomes

Those who participate in this activity should be able to do the following:

- Use all three components of planning in preparing to construct the tower.
- Write an objective for the tower construction project at the *start* of the planning period.
- Demonstrate by their actions and comments that they believe planning and sound objectives are an important part of the supervisor's job.

6. *Closing—"Application Ideas" and "Evaluation"* (30 minutes)

Distribute the handout, "Application Ideas" (page 3-33). As the group follows, read aloud the directions for completing the handout. Explain that you will ask those who are willing to briefly describe the on-the-job application plan they have written (after they have had a chance to prepare them).

After 10 minutes, ask for volunteers to share their plans. This activity can lead into a brief summary of the session as you relate their application plans to the original purpose of the program and to the needs they expressed earlier in the day.

A brief evaluation will be conducted by the Evaluation Training Lab team.

This concludes the session.

HANDOUTS

GUIDELINES FOR WRITING OBJECTIVES

1. Be brief and to the point; include only one major item in each objective.
2. Use an action verb to describe the expected result.
3. Specify a time frame or target date for completion.
4. Specify limits in use of resources (money, personnel, equipment, as appropriate).
5. Specify results to be achieved in measurable or observable terms.
6. Choose areas over which you have direct influence or control; don't write objectives that only other units or people can accomplish.
7. Make objectives realistic in terms of previous performance, total responsibilities of the unit, and existing resources.
8. Include enough challenge in an improvement or change objective to make it worth formulating.
9. Select objectives that are supportive and consistent with overall organization missions and objectives.

Sample Objectives

1. To increase by 15 percent the average number of chuckholes that the crew fills per hour, measured over a three-month period, with no increase in crew size.
2. To decrease by 20 percent the amount of lost work time due to on-the-job injuries during the next 12 months.
3. To decrease by 12 percent the total dollar amount of tools that are lost or stolen during the next 12 months.
4. To increase the quality of building cleaning service by scrubbing and waxing each floor surface in the building once every three weeks with no increase in personnel or equipment and no decrease in other services.
5. To provide once-a-week garbage pickup year-round to every residential unit with existing staff and equipment.

THE MAYOR'S MEMO

The Mayor of Rock Ridge issued the following statement six months ago to the department heads of the city:

TO: *All Department Heads*

FROM: *Mayor O'Connor*

SUBJECT: *Energy Conservation and Cost Control*

In accord with the increasing need for energy conservation in all areas of the economy, the City of Rock Ridge will reduce energy consumption in all areas of departmental responsibilities during the coming year, so as to afford the city a reduction in energy consumption with an ensuing reduction in costs.

Since the issuance of this memo, some statistics on energy use have caused the Mayor some embarrassment. Energy use for the past six months has been higher than during the same periods in the previous two years. Some City Council members have called for an investigation of the higher costs of energy conservation and the *Rock Ridge Gazette* has been running editorials pointing out the discrepancy between the Mayor's request and current departmental compliance. The *Gazette* has stated that costs for energy consumption have risen in all departments except Parks and Recreation and the administrative offices under the Mayor's supervision.

When the council asked the Police Chief about his department's increased costs his response was, "Sure, we'd like to save money for the city, but the Mayor knew that this was the year to replace three police cars. We made a change from larger to more compact models and we switched to unleaded gas. These are energy-conserving measures, but initially they are going to cost a little more money. Unfortunately, the memo the Mayor sent us was ill-timed for our department, as we were already committed to these purchases and changes. These expenditures seem to be the major focus of this investigation, whereas some of our energy conservation methods in other areas have not been noticed. These are costing us more money in terms of person-hours, but the results in terms of energy savings are important."

When questioned further, the Police Chief explained that the department had done the following: (1) Increased the frequency of vehicle inspections from twice monthly to weekly; (2) Removed air conditioning units from most vehicles; and (3) Advised all police vehicle drivers to avoid idling their engines for more than two minutes.

The Chief also commented, "We have had plenty of grumblings on the force. It gets mighty hot around here in the summer. Also, the officers feel that inspection time keeps them off the road more than necessary. Now we're getting criticism from the papers, and you council members don't think we're doing a good job. It is going to make my job of trying to enforce these measures that much harder."

The council also asked the head of Public Works about the rising costs in the area of solid waste disposal. The response was: "Solid waste disposal is an impossible area to conserve energy what with all the new state and federal laws and standards. This just isn't the year to conserve on energy expenditures. We've tried to conserve by purchasing larger trucks and transferring solid waste to trailers for compressing and dumping, but this new equipment costs money, and carrying larger loads in larger trucks ends up costing us twice as much money for fuel in order to meet air quality standards. So, even though we save in some areas, it costs us double in others. The Police Chief already caught it from the papers, and I'm sure our area will be next. Mayor O'Connor, I sure wish you'd have talked to me before you wrote that memo."

The council then asked the Director of Parks and Recreation how his department had been so successful in cutting costs and energy usage.

"We were in luck. Most of our equipment had been replaced last year, and we had also purchased some new timing devices to automatically shut off lights, heat, or air conditioning in areas with little use after 9 p.m. We shared the Mayor's memo with our staff and talked about ways to reduce energy use cost. With this team approach to energy conservation, our staff came up with several innovations that we have implemented:

1. Closing pools and tennis courts at dark to cut lighting costs.
2. Mowing small grassy areas by hand mowers.
3. Reducing the wattage of bulbs in many light fixtures.
4. Equipping vehicles with radios to reduce need to return to the office for reassignment.

"We continue to solicit new ideas at our team meetings. We've tried to reward new ideas appropriately. We are very pleased with the response the staff has given and the results we have achieved."

As a group, you are to answer the following questions:

1. What would you say the Mayor's objective was as stated in the memo?

2. Why did some of the departments have trouble meeting that objective?

3. What differences do you see in the way departments reacted to the Mayor's memo?

4. What should the Mayor have taken into consideration before writing that memo?

5. Taking into account all you have read and discussed thus far, as a group rewrite Mayor O'Connor's memo.

WORKSHEET: WRITING OBJECTIVES

1. Define the overall purpose of your department, division, or unit.

2. Define objectives for your work unit for this year or next year. Include at least one continuing objective and one change or improvement objective for each major area of responsibility of your work unit. Ask others in your group to help you refine your statements of objectives.

COMMUNICATION TOWER PROJECT

Your unit of government has been awarded a federal grant to construct two communication towers. The first stage of the project is to plan and construct a prototype tower. If your unit is able to maximize cost effectiveness on the prototype, the money will be granted to construct the second tower; however, the granting agency retains the right to cancel the grant if the prototype does *not* prove to be cost effective. Your unit's construction project will be compared to that of several other units that have been awarded similar grants, so that the federal agency will have a better basis for judging results.

The federal agency would like to have a tall tower, but has put only two restrictions on the project: (1) the tower must be *at least* 60" tall; and (2) it must totally support (unaided) a book or similar object designated by the trainer at the *top* of the tower for at least 15 seconds. Potential revenues will be based on the height of the tower and possible bonuses.

The project will be divided into two phases. The first phase is planning and the second phase is constructing.

Planning Phase

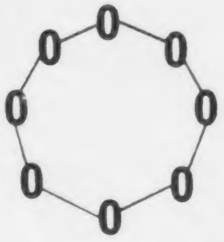
Your group has 45 minutes during this phase to accomplish the following:

- Define your unit's objectives for the project, taking into account cost and revenue data.
- Organize your unit to accomplish the task.
- Choose the design or make up your own design for the tower.
- Develop detailed plans for the construction of your prototype tower.
- Establish any controls you feel are necessary.
- Plan for your tower construction site.
- Record your plans, including all budget figures. Give one copy of your plans to the trainer at the end of the Planning Phase. Keep at least one copy of your plans for your unit.

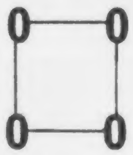
You are allowed to handle and assemble materials, but no more than *two tiers* of the tower may be built during the planning phase. All of the pieces must be completely disassembled before beginning the construction phase. You will be notified when to begin the construction phase. For now, be sure to study all of the tower data very carefully to determine tower-related objectives.

Design Possibilities

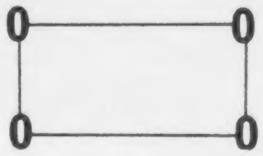
Some of the designs are proven (stable) and some are unstable. Remember, the tower must support a book or similar object designated by the trainer.



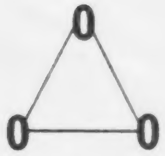
OCTAGON



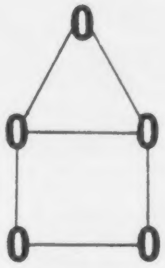
SQUARE



RECTANGLE



TRIANGLE



PENTAGON

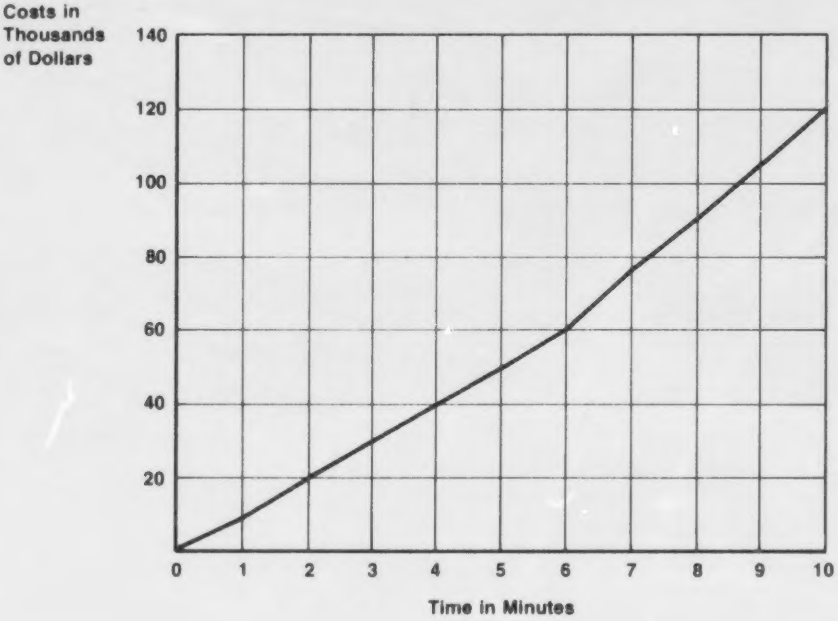
SPIRE

Cost Data for Tower Construction

(Material Costs)

Description of Construction Pieces	Unit Cost
1. Purple	$1,000
2. Green	700
3. Red	500
4. Blue	400
5. Yellow	300
6. Orange (both wooden sticks and plastic connectors)	200
7. Spool—Small Hole	500
8. Spool—Large Hole	400
9. Connectors (round object with five holes on the flat surface)	300
10. Wheels	200

Time/Labor Costs



Tower Revenue

(Based on Tower Height in Inches)

Tower Height	Revenue
60"	$ 75,000
65"	80,000
70"	85,000
75"	90,000
80"	97,500
85"	105,000
90"	112,500
95"	120,000
100"	125,000
105"	127,500
110"	130,000
115"	132,500
120"	135,000

Bonus and Penalty Awards

A bonus will be awarded to a government unit for accurately estimating (within 10 percent) what its construction costs will be. A penalty will be assessed to a government unit if its actual costs exceed its estimated costs by more than 10 percent.

Construction Phase

All government units will be started at the same time for this phase by the trainer. You should be at your construction site and be prepared to begin.

When your unit has completed the space tower, be sure to signal the trainer immediately so that your actual time can be recorded accurately. Remember, the tower must be stable enough to support a book or similar object as furnished by the trainer.

When construction is complete, record the actual revenue items and cost items under the column headed *Construction Record* on your plan worksheet. Calculate whether your unit is eligible for a bonus or a penalty as indicated on the worksheet and record it appropriately.

Figure the project's cost effectiveness. If it is greater than 1, the prototype tower was cost effective; if it is less than 1, it was not effective.

Example: $\frac{\text{Total Revenue}}{\text{Total Cost}} = \frac{\$125,000}{\$100,000} =$ Ratio of 1.25

Compare your results to those of other units.

Plan for Tower Construction

Government Unit ______________________

Objectives:

Organization:

Controls:

Tower Estimates (Budget)

Revenue (Tower Height) $ ________

Costs
  Materials $ ________
  Time/Labor $ ________
Total Costs $ ________

Figure 10 percent of Total Estimated Cost $ ________

Construction Record

Revenue
  Tower Height $ ________
  Bonus $ ________

Total Revenue $ ________
Costs
  Materials $ ________
  Time/Labor $ ________
  Penalty $ ________
Total Costs $ ________

Was your total cost estimate within 10 percent (+) or (−) of your actual cost? If so, add 10 percent to your tower *Revenue* as a bonus.

Did your actual construction cost exceed your cost estimate by 10 percent? If so, add the 10 percent figure to your total *Cost* as a penalty.

Summary Information

Actual tower height: ________ inches.
Time needed for construction: ________ minutes.
Cost effectiveness ratio: $\frac{\text{Total Revenue}}{\text{Total Cost}} =$ ______________ = ________

APPLICATION IDEAS

It is important for you to think about how you can use what you have learned about planning and objectives back on the job. What will you do differently? What techniques or procedures will you try out? Specifically, what have you learned that you can apply in your own work situation?

AS A RESULT OF THIS PROGRAM, I PLAN TO DO THE FOLLOWING:

1.

2.

3.

4.

5.

TRAINING OF TRAINERS

GUIDE NO. 4

TRAINING EVALUATION

Leader's Guide

by Kent Chabotar

National Training and Development Service
for State and Local Government
Trainer's Resource Service

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THE AUTHOR

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TRAINING EVALUATION*

The purpose of this workshop is to outline basic methods of training evaluation and to promote its use among public sector trainers. Training evaluation is a series of steps that can be used to improve training in any organization. Training evaluation is a 10-step process designed to:

1. *Investigate the background of the training program and the needs it addresses*. This addresses the reasons why and how the training program is being conducted. This requires interviews with department managers, supervisors, the training director, the trainers, and others in the organization affected by the training.
2. *Assess evaluation resources and constraints*. Factors to be considered include the availability of funds, support for the evaluation by the sponsoring organization, and availability of background information on participants.
3. *Decide on questions the evaluation will answer*. This involves defining the goals and objectives of the evaluation in order to provide the basis for evaluating the program's success.
4. *Determine training standards*. Training standards provide the base of reference to determine whether training is successful. A training standard consists of a general goal, objectives, and performance indicators.
5. *Choose a research design*. The research design is the blueprint for the evaluation. It describes groups being evaluated and the sequence they are being evaluated in. The design also enables the evaluator to infer what would have happened had the groups not participated in training.
6. *Choose evaluation instruments*. Evaluation instruments enable the evaluator to collect information regarding the knowledge, skills, or attitudes of the participants; the quality of the training process; how the training has affected the organization; and other factors defined in the training objectives. These tools include interviews, questionnaires, tests, and observation guides.
7. *Choose a sampling plan*. Sampling plans specify the number of trainees needed for the evaluation to be representative of the entire program. The number is determined by how general the conclusions are to be.
8. *Implement the evaluation*. Implementation involves carrying out the tasks outlined in the work plan, which includes designing instruments, contacting participants, and scheduling interviews.
9. *Analyze the data generated by the evaluation*. Analysis involves organizing and presenting training statistics. The data produced by an evaluation are analyzed statistically to supply answers to the questions the evaluation was supposed to answer.
10. *Report and use the evaluation's conclusions*. The findings should be disseminated to the trainees, sponsoring organizations, trainers, surrounding community, and other interested parties. The evaluation should be brief and easy to understand.

LEARNING OBJECTIVES

The workshop described in this guide is designed to help public sector trainers acquire the skills and knowledge necessary to carry out training program evaluations. Objectives of the workshop include the ability to:

1. Understand the need for and uses of training evaluation.
2. State measurable objectives and performance indicators for training programs.
3. Design appropriate questions for the evaluation process.
4. Develop valid and reliable methods for measuring training results that meet the needs of an organization.
5. Select appropriate statistical techniques for analyzing data.
6. Report evaluation results in a clear and useful fashion.
7. Carry out an evaluation design in an actual training setting, including data analysis and report preparation.**

The training activities for achieving these seven objectives require six hours of lecture, discussion, and exercise work in the classroom. An additional 10 hours of lab planning, participation in the training lab, and evaluation of the lab experience are required for those who select the evaluation lab option.

PREREADING ASSIGNMENT

- Chabotar, Kent, "The Logic of Training Evaluation," *Personnel* (July/August 1977).
- Kirkpatrick, Donald, "Techniques for Evaluating Training Programs," reprinted from *Training and Development Journal* (Madison, Wisconsin: American Society for Training and Development, 1977).

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*This discussion is adapted from "The Logic of Training Evaluation" by Kent Chabotar, *Personnel* (July/August 1977).

**This objective applies only to those participants who select the evaluation training lab.

TRAINING EVALUATION

Time | **Activity**

8:30 a.m.
(15 minutes)

Orientation

This session is designed to give participants an overview of the day's schedule. This includes:

- Content to be covered.
- Structure and schedule of the session.
- Review of learning objectives.

Participants should be provided with a copy of the learning objectives in advance.

8:45 a.m.
(15 minutes)

Process of Evaluation

This session is designed to acquaint participants with the purpose of conducting training program evaluations.

1. Provide a definition of "evaluation." For example:

   Evaluation is the process of determining the results attained by an activity designed to achieve a definite purpose.

2. Discuss some of the reasons why a trainer should evaluate an organization's training programs, such as:
   - To determine whether the training program is accomplishing its assigned objectives.
   - To identify the strengths and weaknesses of training activities.
   - To determine the cost/benefit ratio of the training program.
   - To establish a data base that organization leaders can use to demonstrate the productivity and efficiency of their operating procedures.
   - To establish a data base that can assist organization managers in making decisions.

3. Discuss the fact that one of the most important reasons a trainer should make evaluations is to justify the need for training in an organization. For example:
   - Evaluation is a continuing process and should not be regarded as the last step in a training program.
   - Evaluation helps eliminate the guesswork regarding the need for a training program.
   - Top management should be kept informed of the progress of a training program and the reasons to continue or change a program based upon the needs of the organization.
   - Evaluation is a series of simple steps that does not require the expertise of a statistician.

9:00 a.m.
(30 minutes)

Logic of Training Evaluation

This session is designed to explain to participants the steps involved in the evaluation process.

1. Discuss the process of training evaluation as a series of steps that build on each other to provide information about the merits of a particular training program (see diagram on page 4-22).

   This process provides:
   - A theoretical framework for training evaluation.
   - A practical guide for the evaluator outlining the procedures involved in conducting the evaluation.

2. Review the 10 steps in training evaluation:

   a. Investigate the background of the training program and the needs it addresses. In this first step:
      - The evaluator contacts the organization and becomes familiar with the reasons why training is being conducted and the environment in which it is taking place.
      - The trainers, training content and delivery system, trainees, sponsoring organization, and surrounding community are studied.
      - Few judgments are made.

Questions to be asked include:

- What organizational and personnel needs is the training program supposed to remedy?
- Why is this training program being conducted?
- What content and delivery systems have been designed for the training program?

b. Assess evaluation resources and constraints, such as time, money, staff, need for information, and political support. This is an important step because:

- No evaluation design can be based solely on technical considerations.
- Any evaluation must also assess relevant political, social, and economic resources and constraints.
- Assessment of resources and constraints will influence the scope and content of the evaluation.

Questions to be asked include:

- How much time and money are available for the evaluation?
- What is known about the understanding of, and appreciation for, evaluation within the organization?
- How accessible are background data on the ages, education, and experience of trainees?
- Will top management support the recommendations resulting from the evaluation?

c. Decide on the questions the evaluation will answer. This is important because:

- Many questions might be asked about the effectiveness of a training program.
- The sponsoring organization and the evaluator must decide which questions should be addressed.
- The evaluation process can focus on answering selected questions and thus conserve time and money.

Questions to be asked include:

- To what extent did the program meet its objectives? (This is the principal question.)
- What is the relationship of the program to the total need for training in that area?
- How cost-effective is the program?
- What did the trainees think about the trainer, training facilities, and usefulness of the training program?
- What kinds of trainees benefited most from the training?

d. Determine training standards. The sponsoring organization and evaluator should agree upon the goals and objectives of the training program before the evaluation begins. A definition of a training standard includes:

- Goals—General and timeless statements of purpose that summarize the basic rationale for the program.
- Objectives—More specific statements that define the results to be attained, when, and by whom. Objectives offer direction to the trainer and motivation to the trainees. They also provide a concrete basis to evaluate the program's success and to hold appropriate persons accountable for results.
- Performance indicators—Contained within objectives; they measure the expected results described in the objective.

e. Choose a research design. The research design is the blueprint for an evaluation. The research design:

- Describes which groups are being evaluated and when they are being evaluated.
- Enables the evaluator to determine the difference between what actually happened to the trainees and what would have happened had they not participated in the training.
- Makes it possible to rule out extraneous explanations of the impact of a given training program by requiring performance comparisons of trained (experimental) and untrained (control) groups.
- Randomly assigns participants to experimental and control groups.

Selecting an appropriate research design is determined by:

- The specific nature of the training program.
- The level of precision needed in the evaluation data.
- The organization's resources.
- The availability of control groups and random assignment of subjects.

f. Choose evaluation instruments (i.e., data-gathering tools). The instruments should:

- Enable the evaluator to collect information about trainee knowledge and attitudes, the quality of the training process, the impact of training on the organization, and other factors identified in the training objectives.
- Be suitable to the evaluator's skills, need for information, and resources.
- Be selected because of their statistical reliability and practicality. A reliable instrument should be consistent; that is, it can be used in a variety of settings at different times and still produce accurate data.

Instruments that have been used in training evaluation include:

- Interviews.
- Questionnaires.
- Tests.
- Observation guides.

g. Choose a sampling plan. A sampling of trainees should be evaluated because:

- Training officers cannot usually evaluate the experiences of all trainees in a program.
- Comprehensive coverage is physically and financially impossible.

Sampling procedures:

- Enable training officers to examine some of the trainees to get an approximate idea of the feelings and beliefs of all the trainees.
- Enable training officers to make generalizations about a program or group that are valid and reliable.
- Reflect the age, income, attitudes, and other characteristics of the population.

h. Implement the evaluation. The evaluator must plan and perform the tasks specified in the evaluation workplan, including:

- Recontacting the sponsoring organizations to confirm the start of the evaluation.
- Constructing evaluation instruments.
- Training interviewers.
- Administering instruments.
- Making travel arrangements.

i. Analyze the data generated by the evaluation. The raw data produced by an evaluation must be analyzed statistically to supply answers to the questions that the evaluation was supposed to answer. Different types of statistics include:

- Statistics of central tendency (mean, median, or mode), which convey a general idea of the impact of training on the trainees as a group.
- Statistics of variability (standard deviation and analysis of variance), which calculate how widely trainee performance varies when compared individually and over time.
- Statistics of association (correlation and regression), which show the quantitative relationship of different training elements (e.g., the relationship between trainee rapport with the trainer and the skills acquired from training).

j. Report and use the evaluation's conclusions. This is a critical task because a valid and reliable evaluation is not always used by the organization. In order for the evaluator to share information that will benefit a wide audience, the report should be:

- Tied directly to the program's needs and objectives.
- Detailed enough to be diagnostic, yet brief enough to be practical.
- Coherent to decisionmakers who may not have evaluation expertise.
- Developed cooperatively by all those involved in the evaluation effort.

9:30 a.m.
(30 minutes)

Research Questions

This session is designed to help participants develop research questions necessary in the evaluation process.

1. Explain to participants that one of the first steps in evaluation is to determine the questions to be asked. This provides a focus for evaluation and ensures that time and energy are not wasted.
2. Review the two categories in which questions will be asked. Some questions are concerned with the training process, which includes:
   - The scope and goals of the training program.
   - The organization and administration of the training program.
   - The content and delivery of the training program.

   A second category of questions is concerned with the training impact, which includes:
   - Effects of training on trainees.
   - Effects of training on the organization.
3. Review sample questions related to each category. Sample questions dealing with the training process include:
   - Are the goals of the training program realistic? Can the goals be measured?
   - Are the right subjects being addressed in the training program? Are the subjects being taught effectively?
   - Is the training program meeting the goals of the organization?

   Sample questions dealing with training impact include:
   - Has the behavior of the trainees been altered? Are they performing more effectively?
   - Have changes occurred within the organization as a result of the training? Have the changes occurred as planned?

10:00 a.m.
(15 minutes)

Break

10:15 a.m.
(60 minutes)

Training Standards

This session is designed to instruct participants in how to establish training standards.

It is important for the trainer and the organization to understand and agree upon what is to be accomplished by a training program. This requires establishing training standards. The evaluator must also obtain a written copy of the training standards from the organization. This will avoid any discrepancies that might arise based on evaluation results.

1. Define "training standard." For example:

   A training standard is a base of reference from which to determine whether training is successful. It involves goals, objectives, and performance indicators.
2. Review the three components of a training standard. Use the *Planning Triangle* (see page 4-23) to illustrate the relationship among these components.
   - *Goals* are general statements of purpose that summarize the basic rationale for a training program.
   - *Objectives* are specific statements that define the results to be attained, when, and by whom. Objectives offer direction to the trainer and motivation to the trainees. They also provide a concrete basis on which to evaluate the program's success and to hold appropriate persons accountable for results.
   - *Performance indicators* are measures of the expected results described in the objective.

3. Provide participants with additional examples that illustrate the relationship of goals, objectives, and performance indicator groups (see page 4-24). Discuss how each component meets the criteria of a training standard.

4. Ask participants to complete a self-instruction exercise on *Rating Objectives* (see page 4-25). Discuss their answers (about 10 minutes).

5. Ask participants to complete (about 15 minutes) a second self-instruction exercise in *Writing Objectives and Performance Indicators* (see page 4-26). Ask participants to share their work in teams of two and to act as consultants to one another in reviewing objectives and performance indicators for conformity with good practice (about 15 minutes). Ask participants to share what they have learned about writing objectives with each other. If time permits, discuss a few examples.

6. Review the purposes of establishing training standards. For example, training standards:

   - Help an organization focus on what future conditions should be, and set a direction for planning activities.
   - Motivate participants to focus their learning.
   - Designate who is accountable for results of training.
   - Provide a basis to evaluate program effectiveness.

   Sources of training standards include:

   - *Pre-existing sources* taken from current programs or mandated by statute.
   - *Development of new standards* from needs assessment data, review of course descriptions, interviews with training staff, interviews with potential trainees and supervisors, and review of organizational and personnel performance records.

11:15 a.m.
(45 minutes)

Research Design

This session is designed to acquaint participants with different research designs, including how to read a research design and evaluate the concept and appropriateness of a design. There are three basic criteria for effective training evaluation. Every training officer should strive to plan evaluations that are valid, reliable, and usable. In most cases, the adequacy of the data produced by an evaluation will depend on the extent to which these criteria have been met.

1. Provide a definition of "research design." For example:

   A research design is the blueprint for the evaluation. It describes which groups are being evaluated and when (with reference to training) they are being evaluated. It should enable the evaluator to determine what would have actually happened had group members not participated in training.

2. Discuss the concept of validity and how it affects a research design. For example:

   - Validity measures the potential accuracy of an evaluation. It refers to the relevance of the methods and instruments to the purposes for which the evaluation is being conducted.
   - Validity is concerned with isolating training effects so that training programs can be evaluated fairly.
   - A research design's validity can be affected by factors which, if not brought under control by the evaluator, may complicate efforts to measure training effects. These factors fall into two categories: internal and external.

   Questions related to validity include:

   - Do the methods and instruments measure what they are supposed to measure?
   - Will the data produced serve as a true indicator of the extent to which training goals have been achieved?

3. Define and briefly discuss internal validity. For example:

   - Internal validity is the extent to which the evaluator can separate the effects of training on the trainees from the effects of unrelated events or circumstances.
   - Internal validity is the basic minimum standard used to interpret a training program's results.
   - Internal validity answers the question: To what extent can it be clearly assessed whether training made a significant difference in the actions and attitudes of the trainees?
   - The factors affecting internal validity are extraneous variables that may have an impact on the trainees, yet go unmeasured by evaluative instruments (e.g., changes in the organizational environ-

ment, natural maturation of the employee, changes in the evaluation process itself, selection procedures of trainees, and trainee drop-out rate).

- Internal validity ensures the precision of the evaluation.

4. Define and briefly discuss external validity. For example:

   - External validity is the extent to which evaluation data about one training program can be generalized and related to other programs and contents (i.e., Will the results of training Program "A" on Group "X" hold true for Groups "Y" and "Z"?).
   - Threats to external validity are factors that impede an evaluator's ability to apply general conclusions (generalizability) about one training program or group to another program or group (e.g., effects of pretesting the instrument, selection of trainees because of high potential, and artificial conditions that render the training setting atypical).
   - External validity ensures the generalizability of the evaluation.

5. Evaluations can minimize the influence of validity problems through various research strategies.

   Define and briefly discuss two research strategies. These include:

   a. Control Groups.

      - A control group is a group of agency personnel who do not participate in the training program, but who are similar in most respects to those who do participate.
      - The control group constitutes a baseline standard against which to measure changes in the experimental group (the trainees). That is, the experimental group would have performed the same as the control group had it not been trained.
      - Factors affecting internal validity usually influence both groups equally; therefore, any difference measured between the groups should be the result of training (e.g., all things being equal, training had a positive effect if the trainee group's performance is superior to that of the control group).
      - The use of control groups protects an evaluation against factors affecting internal validity, thus ensuring the precision of the evaluation.

   b. Random Selection.

      - Random selection means that every person eligible for evaluation has an equal chance of being selected.
      - Random selection ensures the generalizability of the evaluation. Trainees will be roughly representative of the larger agency and will not favor any special interests or backgrounds.
      - When random selection is not employed, findings will not be generally applicable. Thus, the evaluation will lack external validity.

6. Ask participants to read a self-instruction exercise on *Use of Control Groups* and to answer the questions about the effect of training on tested groups (about five minutes). Discuss their answers (see page 4-28).

7. Discuss the conditions under which the use of control groups and random selection are appropriate. For example:

   - Process evaluations do not attempt to isolate training effects; instead, they measure the apparent quality of the scope and goals of training, organization and administration, and content and delivery. There is no need for control groups. Random selection of programs to be evaluated may save time and money.
   - Impact evaluations are more concerned with isolating training effects on the trainees and the organization. The need for control groups and random selection depends upon what is to be measured.
   - Control groups or random selection is not needed when measuring skill changes that are concrete and readily attributable to training.
   - Control groups or random selection is needed when measuring knowledge or attitude changes that are intangible and more difficult to attribute to training.

12:00 noon **Lunch**

1:00 p.m.
(45 minutes)

Research Design (Continued)

8. Discuss the problems in using control groups and random selection. For example, control groups may be hard to find because:
   - Extra people may not be available to serve in control groups.
   - Putting people in control groups may deny service within the organization.
   - Control groups do not benefit from the evaluation and may feel rejected or cheated.

   Random selection, on the other hand, may be hard to implement because:
   - Careful selection of trainees threatens true random selection.
   - Everyone may need to be trained immediately.

9. Review how to read a research design using symbols to identify typical training terms. For example:

   E = Experimental group participating in the training program.

   C = Control group not participating in the training program.

   X = Exposure of the experimental group to the training program, the effects of which are being measured.

   O = Process of observing, measuring, and evaluating the effects of the training program.

   R at the end of row = Random selection.

   Series of dashes (---) between rows = Nonrandom selection of participants.

   Explain the placement of symbols to indicate movement in time. For example:
   - Any X's or O's in a horizontal row indicate the application of these variables to the same group.

     E O_1 X O_2
     C O_3 O_4
   - Movement from left to right represents advancement from one point in time to another.
   - Vertical assignment (columns) of these symbols indicates that these variables, either X or O, occurred at the same time to different groups.

     E O_1 X O_2
     C O_3 O_4

10. Select an appropriate research design. Appropriateness of the design depends upon the accuracy desired, the timing of the evaluation, and available funds. There are three different kinds of research designs: pre-experimental, quasi-experimental, and true experimental.

    Define and briefly discuss the different kinds of research designs. Refer to the table entitled *Comparative Designs* (see page 4-29), for the advantages and disadvantages of each design.

    a. One-Shot Case Study (Pre-Experimental).
       - This design measures trainee performance at the end of training against some goal or objective—that is, a single group is studied only once.
       - Because no pretest data are available, this design makes it difficult to measure any difference in trainee actions or attitudes. Thus, it is impossible to discern the impact of training.
       - This design has no control over factors affecting its validity, and is of almost no practical worth.

    b. One-Group Pretest/Posttest Design (Pre-Experimental).
       - This design uses pretests to determine trainee actions and attitudes prior to training and posttests following the training.
       - Pretesting may sensitize trainees to topics and questions they might not ordinarily perceive in the training session. Thus, changes measured in the posttest may result from the pretest.
       - Interference from the pretest threatens the external validity of this design.
       - There is no way of determining whether employee performance improved as a result of the training, or if performance would have improved by the amounts specified in the objectives even without training (i.e., persons participating in the training could make gains as a consequence of normal growth or development).

c. Time Series (Quasi-Experimental).

- This technique involves measurement of a group at periodic intervals before the program begins and after it ends.
- This design allows the experimental group to be its own control group and enables the training officer to compare performance before training started and after a program ended.
- The time series is especially useful in determining a training program's long-range effects.
- Absence of random selection does not ensure the general applicability of the evaluation.
- This technique is vulnerable because the organizational structure and environment may change over time.

d. Nonequivalent Control Group Design (Quasi-Experimental).

- This design involves a comparison between two groups that are selected intact for training and evaluation. One group serves as the control group (nontrainees), the other as the experimental group (trainees).
- Both groups must be similar with respect to pretraining criteria (e.g., hierarchical position and experience in whatever area the training program is designed to improve). For example, agency heads should not be compared with firstline supervisors, nor experienced personnel with inexperienced.
- The training officer must recognize the biases that can arise from the nonequivalence of groups (e.g., trainees are likely to be more motivated in their performances than nontrainees).
- Random selection is difficult and therefore threatens the generalizability of the evaluation.
- A pretest may sensitize trainees to specific areas of learning, and thereby affect posttest results.

e. Pretest/Posttest Control Group Design (True Experimental).

- Both the experimental and the control groups take a pretest and posttest, but only the experimental group participates in training. Use of a control group helps to ensure the accuracy of the evaluation.
- Trainees and nontrainees are apportioned randomly to groups, thus ensuring generalizability.
- Theoretically, all possible factors affecting validity are controlled.
- The weakness of this design is that the evaluation itself, rather than the training program, may produce changes in trainee performance. For example, trainees may be alerted by the pretest to key events in their work that they might not ordinarily notice.

f. Posttest-Only Control Group Design (True Experimental).

- Only a posttest is given to randomly selected experimental and control groups immediately after training ends.
- The sensitizing effects of a pretest on trainees is eliminated. (Dispensing with a pretest also lowers the costs of evaluation.)
- This design minimizes almost all known factors affecting validity.
- One drawback to the posttest-only design is that the evaluator cannot determine exactly how much the experimental group changed as a result of the training.
- Change in performance is determined by the difference between the experimental and control groups.

Note that pre-experimental designs account for 75 percent of those evaluations actually conducted, quasi-experimental designs for another 20 percent, and true experimental designs for the remaining five percent.

11. Ask participants to complete the self-instruction exercise on *Assessing Research Designs* (see page 4-30).

1:45 p.m.
(90 minutes)

Evaluation Instruments

This session is designed to acquaint participants with different evaluation instruments, how and when they are used, and the advantages and disadvantages of each.

1. Provide a definition of "evaluation instrument." For example:

   An evaluation instrument is a tool for gathering data about the process or impact of training. It elicits information in writing (questionnaires or tests), orally (interviews), and indirectly (observation and organizational records).

2. An evaluation instrument must be valid and reliable. Define the concept of instrument validity and reliability:
   - Validity refers to the truth of the instrument; that is, the *accuracy* with which it measures the knowledge, attitudes, or performance it claims to measure.
   - Reliability refers to the stability of the instrument; that is, the *consistency* with which it measures (e.g., If the same trainees are measured repeatedly with the same or comparable measuring instruments, will the same or comparable results be obtained?).
3. In designing an instrument, the evaluator must be aware of:
   - The reactive effect of the evaluation, which is the extent to which an instrument permits respondents to alter their normal behavior to suit the evaluator (e.g., the respondents will answer the questions in the way they believe the evaluator wants them answered, rather than honestly).
   - The use of obtrusive versus unobtrusive instruments.
4. Briefly discuss the use of obtrusive and unobtrusive instruments. For example:
   - Obtrusive instruments maximize reactive effects; that is, they involve respondents directly in the evaluation in order to obtain evidence of training impact on knowledge, skills, attitude, and job performance (e.g., interviews and tests).
   - Unobtrusive instruments minimize reactive effects; that is, respondents need not participate in, or be aware of, the evaluation (e.g., observation and organization records).
5. Review and explain the six steps required in developing evaluation instruments:
   a. Decide what type of information will be sought.
      - Knowledge.
      - Skills.
      - Attitudes.
      - Job performance.

   b. Select the appropriate instrument(s) to gather the information.
      - Interviews.
      - Questionnaires.
      - Tests.
      - Expert opinions.
      - Observations.
      - Informal feedback.
      - Organizational documents.

   c. Design the instrument around the training performance indicators.
      - Achievement of training goals.
      - Value of each training unit.
      - Value of specific training components.
      - Quality of overall training program.

   d. Decide on a form of response.
      - Dichotomous (i.e., yes or no).
      - Multiple choice.
      - Scale.
      - Essay.

e. Edit the instrument.

  - Check the content for pertinent questions, relevance to performance indicators, knowledge of respondents, objectivity of form of response, and general appearance.
  - Check the wording for clarity of instructions and fairness of questions.

f. Pretest and revise the instrument.

  - Select a representative sample for testing.
  - Conduct test under comparable conditions.
  - Solicit comments.
  - Revise as necessary.

6. Compare and discuss the advantages and limitations of eight commonly used instruments. Use the chart on *Comparative Instruments* (see page 4-31) for reference.

a. An interview is a series of oral questions answered by a respondent.

  - An interview allows for personal contact and flexibility (e.g., permits follow-up questions).
  - An interview is the most obtrusive instrument and has the highest reactive effects.
  - The interviewing process is expensive and time consuming.
  - Age, sex, appearance, mannerisms, and other personal characteristics of the interviewer can affect both the respondent's answers and the interview's accuracy.
  - An interviewer must be well prepared and trained to ensure accuracy and to avoid negative reactions from the interviewee.

b. A questionnaire is a series of written questions (items) answered by a respondent.

  - Questionnaires are mainly used to assess respondent attitudes and observations about organizational events, rather than knowledge or skills in particular job-related areas.
  - Questionnaires are comparatively impersonal and thus avoid most of the embarrassment and anxiety of the face-to-face or telephone interview.
  - Questionnaires can reach a large sample of people in a short time and at reasonable expense.
  - Questionnaire data can be processed speedily and evaluated statistically.
  - A low return rate seriously threatens the accuracy of data.
  - Answers are given only to the questions or items posed, thus affording less chance for the free expression of unanticipated responses.

c. A test is a series of questions, exercises, or other means of measuring the knowledge, skills, intelligence, or aptitudes of an individual or group against selected criteria or norms. Tests can be standardized or custom-made.

  - Performance and achievement tests are means of sampling what trainees know or can do.
  - Aptitude tests indicate the potential to learn or to procure information or skills in a particular area.
  - Practical tests can establish employee need for training in specific skills, or whether training has improved.
  - Tests are comparatively inexpensive and easy to obtain and administer.
  - Tests can assess learned ideas or facts that may or may not be applicable to on-the-job performance (e.g., the standardized test's reliance on national norms can be a misleading indicator of a trainee's individual performance relative to the norm).
  - No test can measure, with complete certainty, permanent or general ability to learn.
  - Tests must be selected meticulously to reflect the content and purposes of the training program.
  - Tests are a controversial evaluation measure because of charges that they are biased against trainees from lower social and economic classes.

d. An expert opinion is a judgment reached by a person based on experience and competence in a particular study or work. The two sources for expert opinion are program managers and outside consultants.

  - Experts can rate assorted aspects of training against their own standards of quality.

- An expert has the ability to consider simultaneously the many aspects of a training program—both tangible and intangible.
- Expert opinion is helpful where an evaluation involves individual values (e.g., the personality of the instructor or the appropriateness of a course's objectives may require subjective judgments on their worth).
- Emphasis on the expert's personal tastes disregards a major precept of scientific inquiry (i.e., that judgment should be minimized in the data-gathering process in order to avoid human error and bias).
- It is often impossible to determine the authenticity and impartiality of the expert's sources of information.

e. An observation is organized surveillance and appraisal of the behavior of others. Observation becomes an evaluation measure to the extent that it: serves a definite research purpose; is planned and executed systematically; is recorded systematically and related to aspects of training, rather than being presented as a series of random anecdotes; and is subjected to checks on its accuracy and consistency.

- Observations can be simple (observer sits in on session), participant (observer joins the group as a member), or contrived (uses electronic equipment or other secret devices).
- Observations allow evaluators to record behavior as it occurs.
- Observations need not rely on a respondent's memory or anticipated responses.
- Observation is less demanding of the respondent's cooperation and lowers the reactive effects.
- The observation process is subject to human error and bias.
- The cost of hiring a trained observer and the time required may be prohibitive.

f. Informal feedback is the unofficial transmission of evaluative comments within an organization. Informal feedback:

- Is usually oral and can be confidential.
- Produces a low reactive effect and can be implemented for a low cost.
- Can also be gathered systematically through the use of a suggestion box, participant observation, or anonymously returned questionnaires.
- Promotes free expression of honest feelings, but can hamper confirmation of the author's reliability and motivation.
- Can produce a large amount of useless information.
- Is susceptible to human error and bias—it is difficult to determine the accuracy of the information.
- Should never be used as the only measuring instrument in an evaluation; irrelevant comments should be disregarded.

g. Organizational documents constitute the written records of an administration (e.g., agency memoranda, auditing reports, program budgets, employee rating forms, supervisor appraisals, and written plans).

- Organizational documents provide observable, more objective evidence of results not assessed by other evaluation measures.
- Organizational documents minimize reactive effects because the process does not require interfering research (i.e., organizational documents are not produced specifically for the evaluation).
- Organizational documents can be reviewed at a very low cost and in a short period of time.
- An agency's recordkeeping procedures may make this review impossible, especially where completeness and accuracy of information are concerned.
- It is important that the evaluator not abuse the confidentiality of the documents reviewed.

h. An index combines the results of two or more evaluation measures to obtain one composite result.

- An index increases the accuracy of the evaluation.
- An index is reliable only if the evaluation measures employed are reliable.

- It is sometimes necessary to take the index apart and to analyze each measure separately in order to obtain the facts.
- It is necessary to determine the weight of each measure before computing the final results (e.g., the evaluator might assign greater importance to the results of a questionnaire and less to the observations).

7. Read the instructions aloud and ask participants to complete the exercise on *Constructing Evaluation Instruments* (see page 4-32).
8. Ask participants to form two-member teams to review each other's work and to offer suggestions for improvement (allow 30 minutes).

3:15 p.m.
(15 minutes) **Break**

3:30 p.m.
(30 minutes) **Data Analysis**

This session is designed to review the methods and techniques of statistical analysis.

1. Discuss why it is important to use statistical analysis in an evaluation report:
   - Statistical analysis is a reliable technique for studying and describing data.
   - The significance of such data can be grasped more easily if they are organized and summarized statistically.
2. Describe the three kinds of statistics used to perform data analysis:
   a. Statistics of Central Tendency.
      - Statistics of central tendency represent what is typical or average about training (e.g., the typical effect of training on trainees or the typical cost of training facilities).
      - They are known as measures of central tendency because what is average or typical is generally located toward the middle or center of the distribution, where most of the data tend to be concentrated.
      - Three different measures of central tendency are used in training evaluation—*mode* (defines the typical score as the most frequently appearing score), *median* (defines the typical score as the score below or above which 50 percent of the trainees fall), and *mean* (defines the typical score as the arithmetic average of a set of data).

   b. Statistics of Variability.
      - Statistics of variability disclose if training programs or trainees are different, with regard to each other or within themselves (e.g., when pre- and posttraining performances are compared).
      - Statistics of variability reveal whether performance represents an improvement or deterioration from trainee performance before training.
      - Two different measures of variability are used in training evaluation—*standard deviation* (relative measure of the degree to which trainee performance differs from the typical performance of the group), and *analysis of variance* (a statistical method of testing for significant differences between the means of two or more groups).
      - Standard deviation is an average of how distant individual scores are from the mean itself; analysis of variance reveals significant differences between the experimental and control groups.

   c. Statistics of Association.
      - Statistics of association reveal how diverse aspects of the training experience relate to each other (e.g., how the quality of the trainer influences the performances of the trainees).
      - Two measures of association are used in training evaluation—*correlation* (the relationship between events and training results), and *regression* (which uses the knowledge of one training factor to predict the unknown value of a second factor, i.e., cause-effect relations).
3. There is no one best way to compute data. In selecting a method, the evaluator should take into account:
   - The training program.
   - The evaluation's research design and measures.
   - The kind of information required by the training officer or sponsoring organization.

4. Note that common sense, logical thinking, and objectivity are also invaluable tools in understanding and using training evaluation data.

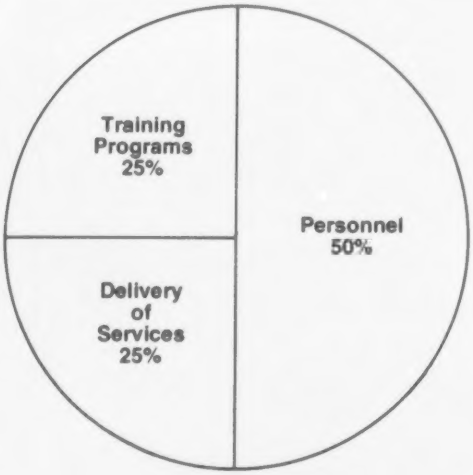
4:00 p.m.
(45 minutes)

Report Preparation and Use

This session is designed to acquaint participants with the various methods one can use in preparing, presenting, and submitting evaluation reports.

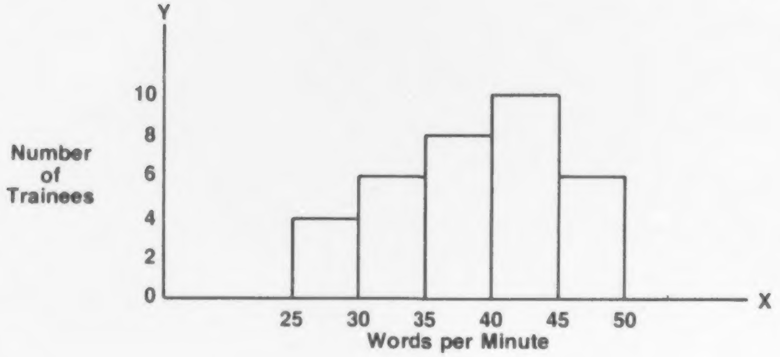
1. Review the contents and organization of an evaluation report. Contents include:
   - Program descriptions.
   - Training standards.
   - Evaluation methods.
   - Data analyses.
   - Conclusions and recommendations.
   - Appendices.
2. Discuss the reasons for preparing and submitting a final evaluation report, including:
   - The time and money spent on the evaluation.
   - The need to share findings with those concerned.
   - The benefits to the organization by implementing the recommendations.
3. The evaluation report must be a readable document. Otherwise, the report will not be used and/or it will be misinterpreted. Review six methods for presenting data in evaluation reports. These include:
   a. Tables, which:
      - Are a systematic arrangement of data for ready reference.
      - Provide a condensed enumeration of data.
      - Compare data over a period of time or among different groups.
      - Are most useful when a large number of statistics are involved.

   b. Pie Charts, which:
      - Are a circular graph whose pieces add up to 100 percent.
      - Are useful for seeing differences among a small number of categories.
      - For example, may illustrate a department's budget as follows:



c. Bar Graphs, which:

- Are used to depict data on a basic X, Y coordinate system.
- Can be constructed by taking the form of a horizontal base line (X axis) along which score values are marked; the vertical column (Y axis) displays frequencies for the range of score values.
- For example, may depict the distribution of scores on a typing speed test as follows:



d. Oral Briefings, which:

- Are a concise statement relating the conclusions and recommendations to the concerned individual (i.e., top management and/or the training officer).
- Outline the report and highlight its major findings.
- Are usually conducted on a one-to-one basis.
- Help ensure that the recommendations of the evaluation will be made known to management in an organization.
- Can be time consuming.

e. Group Meetings, which:

- Allow presentation of the evaluation report to a number of individuals (e.g., department heads, training officers, and organization representatives).
- Are useful in avoiding misinterpretations of statistics and other conclusions.
- Save time and money by briefing everyone at once.

f. Memoranda, which:

- Are informal written notes or reminders related to the evaluation report.
- Serve as a notice of the forthcoming report to ensure the attention of management and the training officer.
- Serve as an abstract of the report and can be circulated among a large number of people within the organization.
- Because of their brevity, could cause some misinterpretation of the data and/or recommendations.

4. Review with participants a self-instruction exercise on *Report Preparation and Use* (see page 4-34). Ask participants to share with each other the area they selected and how they answered each of the questions. It might be desirable to group people who selected the same area to compare their answers (allow 30 minutes).

4:45 p.m. (15 minutes) **Conclusion and Review**

Close the session by reviewing the steps in training evaluation and the learning objectives outlined for the day. Ask participants to comment on the value of the session.

5:00 p.m. **Workshop Adjourns**

TRAINING EVALUATION

ON-SITE TRAINING LAB

The purpose of this training lab is to provide an opportunity for participants to conduct an on-site evaluation of a one-day training session for supervisors in a public agency.

Participants in this training lab will evaluate the program entitled, "Planning and Setting Objectives: A Training Program for Government Supervisors." Participants will conduct an observation of the Designing and Conducting Training Programs team and evaluate the latter's performance. They will also administer a *Participant Reaction Sheet* to the trainees following the session.

Time	Activity
(3 hours)	**Training Lab (Preplanning)** At scheduled periods during the workshop, participants who have selected the training evaluation lab as their field option meet as a team with a designated staff trainer to: • Review the evaluation task in general and the specific training program. The Training Evaluation team will evaluate the session to be conducted by the Designing and Conducting Training Programs team. A member of the Designing and Conducting Training Programs lab team should be present to brief Training Evaluation team members about the program, its contents, who will be supplying leadership, and who will be attending from the cooperating public agency. • Review the *Participant Reaction Sheet* to be distributed to the trainees at the end of the training session (see page 4-36). Discuss the method to be used in administering and scoring this instrument. One member of the Training Evaluation team should be responsible for conducting the evaluation at the conclusion of the training session. • Review the *Training Observation Guide* used to evaluate the performance of the Designing and Conducting Training Programs team (see page 4-38). The designated staff trainer should test the group to ensure consensus on the interpretation of a score. For example, all team members should agree that on a scale of 1 to 5, a 3 indicates that a given objective *was* met. Anything above a 3 constitutes better than average performance in meeting the objective. Anything below a 3 indicates failure to meet the objective. It is important that everyone on the team interpret the scale correctly to assure a valid measure of performance. • Confirm the time, location, and other logistical details with the Designing and Conducting Training Programs team. Prepare in advance any materials to be used during the training session. Note: Training lab preplanning is to be scheduled outside regular workshop time and arranged among participants and the training staff.
10:00 a.m. the day of the training lab (2 hours)	**Training Lab (Performance)** Team members arrive at the training site and seat themselves at the rear of the room. Each team member is given one copy of the *Training Observation Guide* for each training activity included in the day's program. Team members should independently rate each component of the training activity.
12:00 noon	**Lunch**
1:00 p.m. (3 hours)	Team members follow the same procedure after lunch, rating the components of each training activity.
4:00 p.m. (30 minutes)	At the conclusion of the session, a designated Training Evaluation team member asks the trainees to complete a *Participant Reaction Sheet* (page 4-36). Completed forms should be collected.
4:30 p.m.	**Conclusion of the Training Lab**

8:30 a.m. on the following day (45 minutes)

Training Lab (Critique)

Team members and the designated staff trainer meet to aggregate their ratings from the training activities conducted the day before. An observer's guide should be prepared on newsprint, rating each activity on its merits and on its apparent results.

Another newsprint sheet should be prepared on the program as a total training experience. The team should then decide on a format for presenting a 20-minute report to the training group in the general critique session. A separate report should be submitted by the team member responsible for administering and scoring the reactions of the trainees.

9:15 a.m. (90 minutes)

General Critique Session

Following the reports of the other two teams, the Training Evaluation team reports on:

- Participant evaluations of the training session.
- The aggregate ratings of the Training Evaluation team members of the training process. This includes the results of each training activity in the program and the overall process as delivered by the Designing and Conducting Training Programs team members.

10:45 a.m. (15 minutes)

Break

11:00 a.m.

Review and Evaluation Planning

Follow the agenda for *Review and Evaluation Planning* in Leader's Guide No. 1, *A Five-Day Program Design*.

SUGGESTED READING

Browne, R. K., and Patterson, B. R. "The Evaluation of Training Programs." *Public Personnel Review* (July 1970).

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Chabotar, Kent, and Lad, Lawrence. *Evaluation Guidelines for Training Programs.* Bloomington, Indiana: Midwest Intergovernmental Training Committee, 1974.

Gellman, Estelle. *Statistics for Teachers.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

Hatry, Harry et al. *Practical Program Evaluation for State and Local Government Officials.* Washington, D.C.: The Urban Institute, 1973.

Kirkpatrick, Donald, ed., *Evaluating Training Programs.* Madison, Wisconsin: American Society for Training and Development, 1975.

Kirkpatrick, Donald. "Techniques for Evaluating Training Programs." *Training and Development Journal* (March 1977).

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Popham, W., and Sirotnik, Kenneth. *Educational Statistics.* New York: Harper & Row, 1973.

U.S. Civil Service Commission. *Training Evaluation: A Guide to Its Planning, Development and Use in Agency Training Courses.* Washington, D.C.: Government Printing Office, 1971.

Van Maanen, John. *The Process of Program Evaluation.* Washington, D.C.: National Training and Development Service Press, 1973.

Weiss, Carol. *Evaluation Research: Methods of Assessing Program Effectiveness.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

Wildavsky, Aaron. "The Self-Evaluating Organization." *Public Administration Review* (September/October 1972).

Wolfe, Joseph. "Evaluating the Training Effort." *Training and Development Journal* (May 1973).

TRAINING OF TRAINERS

GUIDE NO. 4

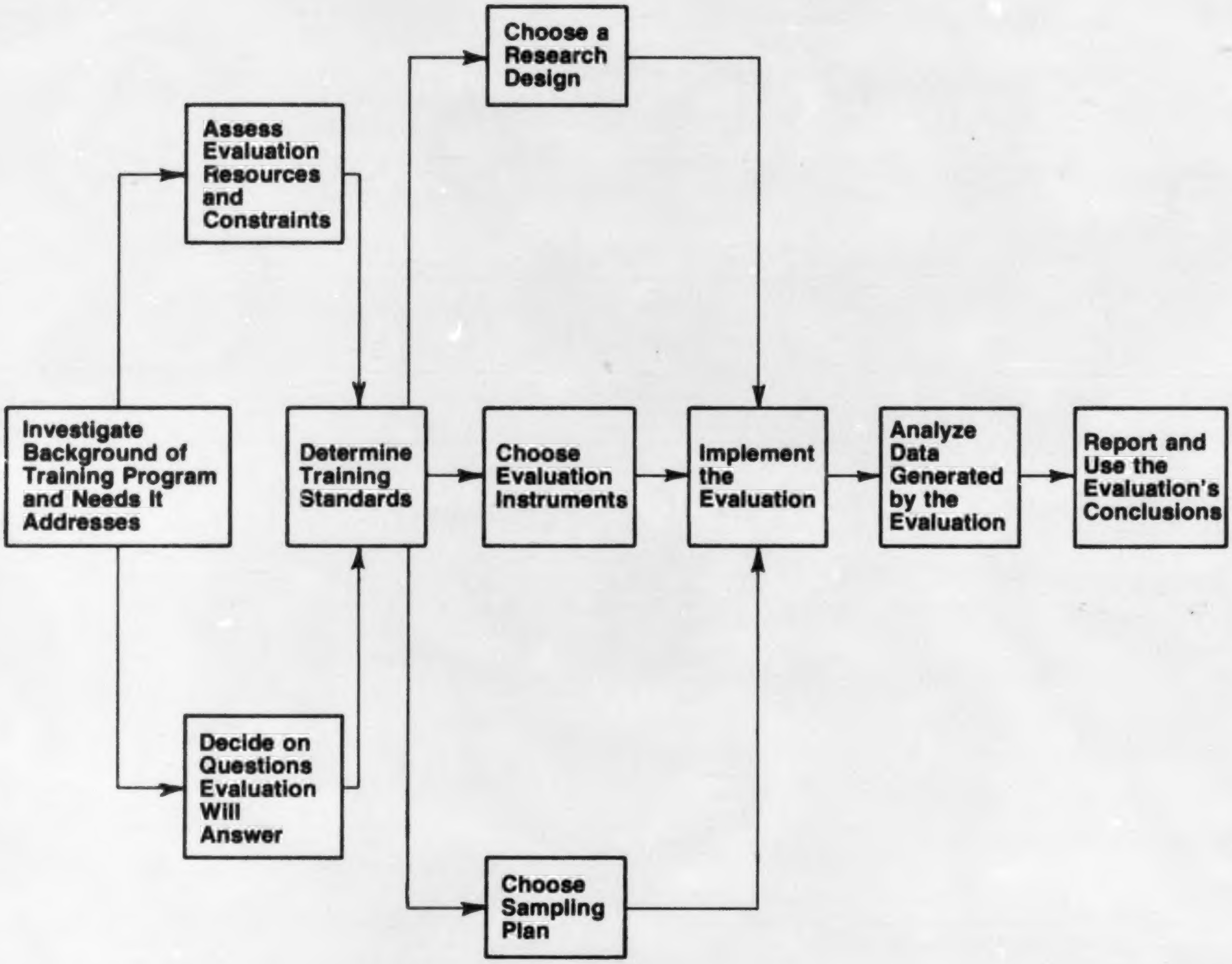
TRAINING EVALUATION

Participant's Sourcebook

by Kent Chabotar

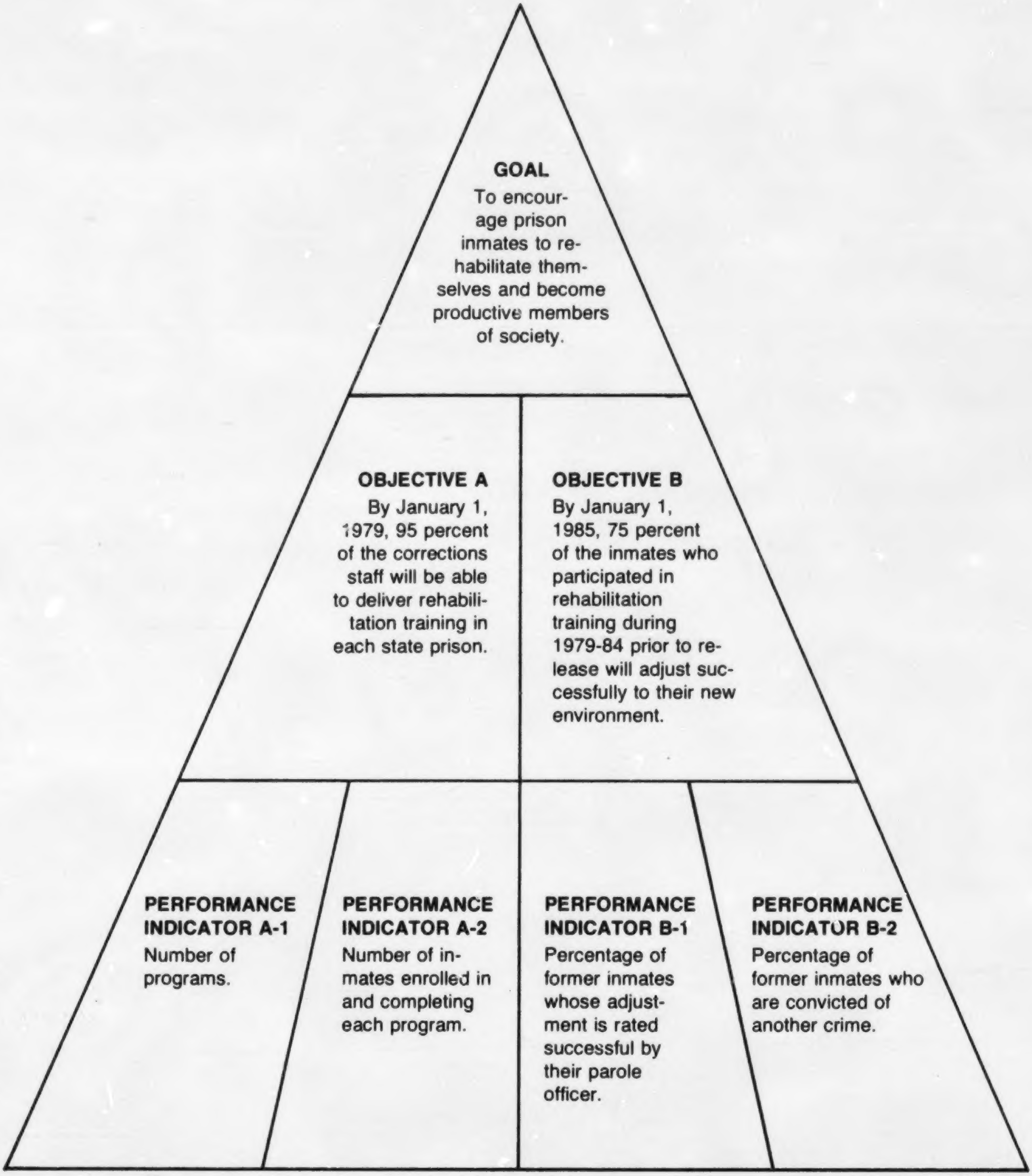
National Training and Development Service
for State and Local Government
Trainer's Resource Service

LOGIC OF TRAINING EVALUATION


Investigate Background of Training Program and Needs It Addresses
Assess Evaluation Resources and Constraints
Decide on Questions Evaluation Will Answer
Determine Training Standards
Choose a Research Design
Choose Evaluation Instruments
Choose Sampling Plan
Implement the Evaluation
Analyze Data Generated by the Evaluation
Report and Use the Evaluation's Conclusions

THE PLANNING TRIANGLE

The relationship among goals, objectives, and performance indicators can be represented by a planning triangle with a goal at the apex, objectives related to that goal in the center, and the performance indicators needed to measure the accomplishment of each objective at the base.



GOAL
To encourage prison inmates to rehabilitate themselves and become productive members of society.

OBJECTIVE A
By January 1, 1979, 95 percent of the corrections staff will be able to deliver rehabilitation training in each state prison.

OBJECTIVE B
By January 1, 1985, 75 percent of the inmates who participated in rehabilitation training during 1979-84 prior to release will adjust successfully to their new environment.

PERFORMANCE INDICATOR A-1
Number of programs.

PERFORMANCE INDICATOR A-2
Number of inmates enrolled in and completing each program.

PERFORMANCE INDICATOR B-1
Percentage of former inmates whose adjustment is rated successful by their parole officer.

PERFORMANCE INDICATOR B-2
Percentage of former inmates who are convicted of another crime.

EXAMPLES OF TRAINING STANDARDS

	GOAL AREA	OBJECTIVE	PERFORMANCE INDICATORS
TRAINING PROCESS	General attitude of management and employees toward training.	By January 1, 1980, 80 percent of the management of the Department of Corrections will demonstrate favorable attitudes toward training.	• Appreciation of the need for training. • Awareness of training impact.
	Adequacy of training staff.	By January 1, 1980, the training division will have sufficient staff to deliver 3-day orientation programs to all new employees.	• Ratio of training staff to new employees. • Prior education and experience of trainers.
	Variety and appropriateness of training methods.	By January 1, 1980, the trainers for the crime prevention program will select their instructional methods.	• Ratio of exercises to lectures. • Use of audiovisual techniques.
	Interest to trainees.	At the end of training, trainees will react favorably to the program.	• Reactions to trainer. • Reactions to relevance of training content to their needs.
TRAINING IMPACT	Knowledge.	By July 1, 1980, 100 percent of the persons in the State Police eligible for retirement benefits will know what the benefits are and how to apply for them.	• Ability to describe benefits. • Number of eligible employees who apply for benefits.
	Skills.	By July 1, 1980, 75 percent of the clerical staff of the Office of the Court Administrator will demonstrate improved typing skills.	• The number of words typed per minute will increase 10 percent. • The number of typing mistakes per page will decrease 10 percent.
	Attitudes.	By September 1, 1980, 80 percent of the probation officers will demonstrate an improved commitment to organizational goals.	• Ability to list the goals. • Ability to state why each goal is appropriate. • Ability to listen to employees.
	Job performance.	By October 1, 1980, the middle management staff of the Department of Corrections will use improved interpersonal skills in their relations with subordinates.	• Decrease in number of grievances filed by their subordinates.
	Reduced backlog.	By July 1, 1980, the Supreme Court will reduce its case backlog by 10 percent.	• Number of cases pending trial. • Average length of time for pending cases.
	Adherence to organization regulations.	By July 1, 1980, the Police Department will decrease its disciplinary problems by 10 percent.	• Number of complaints by superiors. • Number of cases brought to disciplinary hearings.
	Traffic control.	By July 1, 1980, the City of Madison will demonstrate a significant improvement in its control of vehicular traffic.	• Number of citizen complaints. • Number of traffic accidents caused by traffic violations.

RATING OBJECTIVES

SELF-INSTRUCTION EXERCISE

Four examples of possible training objectives are listed below. Place a (√) next to those objectives that are complete and specific enough to permit subsequent evaluation. Be prepared to explain why you did or did not place a (√) next to each objective.

☐ The trainees will know the rules governing sick days and medical benefits at the end of the program.

☐ By June 1, 1980, reading comprehension will be improved by 25 percent.

☐ At least 75 percent of the trainees will know the 14 basic rights of the poor.

☐ Government officials participating in the seminar will be able to write satisfactory grant proposals by September 15, 1981.

Instructions to Facilitator:

The first example is not complete because it does not define who the trainees are and does not list a specific date for the end of the program.

The second example is not complete because it does not say who will increase their reading comprehension.

The third example is not complete because it does not set a time period within which to achieve the results.

The fourth example is complete.

WRITING OBJECTIVES AND PERFORMANCE INDICATORS

SELF-INSTRUCTION EXERCISE

The purpose of this exercise is to learn how to write objectives and performance indicators for training programs. There are three steps. First, write one objective for a training program. Second, categorize that objective according to its component parts. Third, write two or more performance indicators that can serve as concrete measures of the objective's accomplishment.

Step 1: Writing the Objective

The objective is a specific statement that describes the results to be attained, when, and by whom in order for a goal to be accomplished.

An objective includes three elements:

1. The Performer (who).
2. The Performance or Action (will do what).
3. Deadline (when).

Example: By January 1, 1980, 90 percent of the secretarial staff in the Personnel Division will demonstrate reading competence.

WHO: 90 percent of the secretarial staff in the Personnel Division.

WILL DO WHAT: Demonstrate reading competence.

WHEN: January 1, 1980.

Write your objective here. →

(Continued)

Step 2: Categorizing the Objective

Now categorize your objective according to the following statements:

Start here. →

WHO: ______________________________

____

WILL
DO
WHAT: ______________________________

____

____

____

WHEN: ______________________________

Step 3: Writing Performance Indicators

Define appropriate performance indicators for the WILL DO WHAT statement above. For example, if the intended result of the training program for secretaries is to "demonstrate reading competence," then two performance indicators might be:

- The ability to read a selected reading passage at the rate of 250 words per minute.
- The ability to answer correctly four of five questions about the reading passage.

Write your performance indicators here. →

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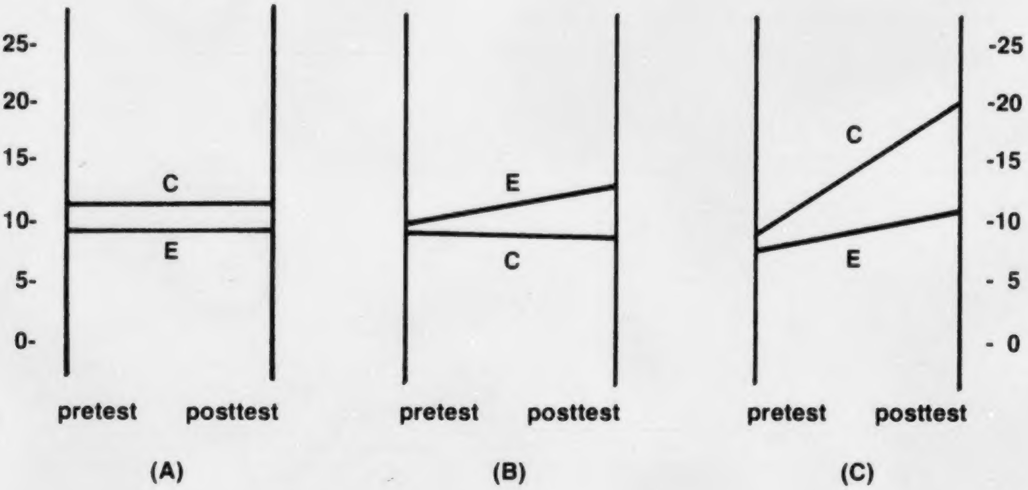
USE OF CONTROL GROUPS

SELF-INSTRUCTION EXERCISE

Suppose that the personnel director of a public agency received graphic reports of the results of three training programs designed to improve employee knowledge of the organization's affirmative action guidelines. For each program, the evaluators compared the results of experimental (trainee) group E with a similar control (nontrainee) group C in order to isolate the effects of training. The experimental and control groups took a 25-question test before and after training.

The three graphs below (A, B, C) depict the average number of questions answered correctly on the pre- and posttests for each program.



1. What was the effect of training on the experimental group (E) in Program A?
    - a. Positive.
    - b. No effect.
    - c. Negative.
2. What was the effect of training on the experimental group (E) in Program B?
    - a. Positive.
    - b. No effect.
    - c. Negative.
3. What was the effect of training on the experimental group (E) in Program C?
    - a. Positive.
    - b. No effect.
    - c. Negative.

Answers to Exercises:

1. No effect.
2. Positive effect.
3. Negative effect.

COMPARATIVE DESIGNS

		Advantages	Limitations
Pre-Experimental	One-Shot Case Study E X O	Most common. Fast and inexpensive.	No pretraining data. No control group to isolate extraneous variables. No random selection to ensure generalizability.
	One Group Pretest/Posttest E O_1 X O_2	Fast and inexpensive. Provides pretraining data.	Sensitizing effect of a pretest. No control group to isolate extraneous variables. No random selection to ensure generalizability.
Quasi-Experimental	Time Series E O_1 O_2 . . . X . . . O_5 O_6	Allows trainees to be their own control group to isolate extraneous variables. Provides pretraining data. Sensitizing effect of a pretest wears off. Provides long-range posttraining data.	No random selection to ensure generalizability. Vulnerable to organizational changes.
	Nonequivalent Control Group E O_1 X O_2 - - - - - - - - - - - - - - C O_3 O_4	Provides pretraining data. Control group to isolate extraneous variables.	Sensitizing effects of a pretest. Possible nonequivalence of experimental and control groups. No random selection to ensure generalizability. Possible unavailability of a control group.
True Experimental	Pretest/Posttest Control Group E R O_1 X O_2 C R O_3 O_4	Provides pretraining data. Control group to isolate extraneous variables. Random selection to ensure generalizability (and group equivalence).	Sensitizing effect of a pretest. Possible unavailability of a control group or random selection.
	Posttest-Only Control Group E R X O_1 C R O_2	Control group to isolate extraneous variables. Random selection to ensure generalizability (and group equivalence).	No pretraining data. Possible unavailability of a control group or random selection.

Reference

E = Experimental group participating in the training program.

C = Control group not participating in the training program.

X = Exposure of the experimental group to the training program, the effects of which are being measured.

O = Process of observing, measuring, and evaluating the effects of the training program.

R at end of row = Random selection of participants for the evaluation; random assignment of participants to experimental and control groups; random exposure of groups to training.

Series of dashes (---) between rows = Nonrandom selection used.

ASSESSING RESEARCH DESIGNS

SELF-INSTRUCTION EXERCISE

Four different research designs are described below. Indicate whether each is a good or poor design according to strict research standards by circling the appropriate term. Write the kind of design it represents in the space provided.

1. A personnel director ordered trainers to run a series of lectures encouraging employees to submit suggestions on how to improve the agency's operations. At the end of the year during which the lectures were presented, the personnel director noted with satisfaction that over 50 percent of the employees in the agency had submitted suggestions.

POOR **GOOD**

Research Design: ______________________

2. A manager, who employed 250 social workers in an agency, wanted to conduct a human relations training seminar. To evaluate the effect of the seminar, the manager randomly selected two groups of 25 workers each. The first group participated in training; the second group did not. Both groups were tested before and after training on their attitudes toward racial minorities. Test results indicated that the 25 workers who attended the seminar improved their attitudes toward racial minorities more than the 25 workers who did not attend the seminar.

POOR **GOOD**

Research Design: ______________________

3. A training officer wanted to try out a new approach to the teaching of typing skills. Before starting the program, the officer developed a typing test to determine how many words each trainee could type. The test was administered to the trainees before and after the program. The results revealed that trainee typing speeds had increased an average of 30 percent.

POOR **GOOD**

Research Design: ______________________

4. From a group of 400, a training officer randomly selected 100 employees and put them in two groups of 50. The first group participated in a training program for first-line supervisors; the second group was untrained and was designated as the control group. The training program was conducted during the month of January. During the first week in February, all 100 employees were given a test covering the course's objectives. The results indicated that employees had benefitted from training.

POOR **GOOD**

Research Design: ______________________

Answers to Exercises:

1. Poor; One-Shot Case Study (1)
2. Good; Pretest/Posttest Control Group (5)
3. Good; One Group Pretest/Posttest (2)
4. Good; Posttest-Only Control Group (6)

COMPARATIVE INSTRUMENTS

Instrument	Advantages	Limitations
Interviews: Series of oral questions answered by a respondent.	Personal contact. Flexible; permits follow-up questions.	Highest reactive effect. High cost; time consuming. Small sample.
Questionnaires: Series of written questions answered by a respondent.	Gives opportunity for expression without fear of embarrassment. Low cost. Large sample can reach many people in a short time.	Inflexible; discourages follow-up questions. Low response rate.
Tests: Series of questions, exercises, or other means that measure the knowledge, skills, intelligence, or aptitudes of an individual or group against selected criteria or norms.	Low cost. Easy to administer. Readily available in standardized form.	Cultural bias. Applicability of results to on-the-job performance.
Expert Opinion: Judgments reached on the basis of experience and competence in a particular study or work.	Evaluation by experts in program's management or subject matter. Many tangible and intangible factors can be taken into account.	Human error and bias. Difficult to check sources of information for conclusions.
Observation: Organized surveillance and appraisal of the behavior of others.	Eyewitness account. Low reactive effects.	Human error and bias. High cost; time consuming.
Informal Comment: Unofficial evaluative comments within an organization.	Encourages openness and honesty. Low cost. Low reactive effects.	Accuracy of information difficult to determine. Useless information acquired.
Organizational Documents: Papers that constitute the official records of administration.	Encourage openness and honesty; usually not written originally for evaluative purposes. Low cost. Low reactive effects. Source of background information.	Accuracy of information difficult to determine. Incompleteness or unavailability of documents due to haphazard recordkeeping system.
Index: Combines the results of two or more evaluation measures to obtain one composite result.	Composite score summarizes results of two or more measures. Easy to understand. Low cost.	Unequal reliability of measuring instruments. Imprecise common denominator.

CONSTRUCTING EVALUATION INSTRUMENTS

SELF-INSTRUCTION EXERCISE

The purpose of this exercise is to learn how to construct an evaluation instrument. There are three parts. First, write one objective for a training program. Second, develop performance indicators for that objective. Third, construct an evaluation instrument based on these indicators.

STEP 1: WRITING THE OBJECTIVE

The objective should specify the performer, performance deadline, and evaluation method.

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____

____

STEP 2: WRITING PERFORMANCE INDICATORS

What is the desired performance in the above objective? ______________________________

____

Write appropriate performance indicators. For example, if a program's objective is to promote mine safety, then a performance indicator of how well this objective is being met would be the number of mine accidents. Make your performance indicators as precise as possible.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

STEP 3: CONSTRUCTING THE EVALUATION INSTRUMENT

Take each performance indicator and construct a questionnaire item, interview question, and behavioral descriptor that might measure the item. For example, an evaluation instrument for the performance indicator of the number of mine accidents mentioned previously might be an interview with a question: "How many accidents did you have last year?"

Performance Indicator	**Evaluation Item/Question**
1. ____________________	____________________ ____________________
2. ____________________	____________________ ____________________
3. ____________________	____________________ ____________________
4. ____________________	____________________ ____________________

(Continued)

If an item or question in the evaluation instrument requires a direct response, the respondent's answer will have to be structured. Determine whether fixed alternatives (e.g., a 1-5 scale or a yes/no forced choice) or an open-ended response is better. For example, the form of response to the interview question "How many mine accidents did you have last year?" might be a scale of: (1) below 10; (2) 10-20; (3) 21-30; (4) 31-40; and (5) above 40.

Evaluation Item/Question	**Form of Response**
1. ______________________________ ______________________________	______________________________ ______________________________
2. ______________________________ ______________________________	______________________________ ______________________________
3. ______________________________ ______________________________	______________________________ ______________________________
4. ______________________________ ______________________________	______________________________ ______________________________

REPORT PREPARATION AND USE

SELF-INSTRUCTION EXERCISE

DIRECTIONS: Five general areas of the training experience can be evaluated:

- ☐ Scope and goals of training.
- ☐ Organization and administration of training.
- ☐ Content and delivery of training.
- ☐ Effects on trainees.
- ☐ Effects on organizations.

Choose one area and answer the following questions:

1. **QUESTIONS.** What specific question do you have about the area selected above? For example, if "scope and goals of training" was checked, the questions that might be asked about it include: (1) appropriateness of needs assessment; and (2) relevance of training plans to identified needs.

   Question: ____

   ____

2. **RESEARCH DESIGN.** Check the research design most appropriate to an evaluation of the above question. The design selected should be relevant to your organization's information needs, resources, and access to control groups and random selection. Be prepared to discuss the rationale for your decision.

   - ☐ One-shot case study.
   - ☐ One group pretest/posttest.
   - ☐ Time series.
   - ☐ Nonequivalent control group.
   - ☐ Pretest/posttest control group.
   - ☐ Posttest-only control group.
   - ☐ Other: ________________.

3. **EVALUATION INSTRUMENTS.** Check the evaluation instrument(s) most appropriate to an evaluation of the above question and your research design.

   - ☐ Interviews.
   - ☐ Questionnaires.
   - ☐ Tests.
   - ☐ Expert opinions.
   - ☐ Observations.
   - ☐ Informal comments.
   - ☐ Organizational documents.
   - ☐ Indexes.
   - ☐ Other: ________________.

(Continued)

4. **DATA ANALYSIS.** Check the statistic(s) most appropriate to an analysis of the data that will be generated by the above instrument(s).

   - ☐ Statistics of central tendency.
   - ☐ Statistics of variability.
   - ☐ Statistics of association.

5. **REPORT PRESENTATION.** Check the presentation methods most appropriate to your training evaluation and most likely to influence key decisionmakers in your organization.

   - ☐ Tables.
   - ☐ Pie charts.
   - ☐ Bar graphs.
   - ☐ Oral briefings.
   - ☐ Group meetings.
   - ☐ Memoranda.
   - ☐ Other: ______________.

6. **REPORT USE.** What roadblocks in your organization prevent using evaluation information? Briefly describe them.

PARTICIPANT REACTION SHEET

PLANNING AND SETTING OBJECTIVES

Instructions

To help determine the program's success, please rate the training program's design, presentation, and value. This information will assist the trainers in improving their future efforts.

Training Goals

Circle the response that best describes how the training program helped:

	Significant Improvement			No Improvement	
1. To improve your knowledge of the governmental planning process and strategies for setting measurable objectives.	5	4	3	2	1
2. To improve your appreciation of the need for careful management planning and appropriate objectives.	5	4	3	2	1
3. To improve your ability to use your own experiences and training material to handle typical situations and problems that arise during the planning process.	5	4	3	2	1
4. To improve your ability to write objectives that fit the circumstances and needs of your organization and conform to the principles of clear objective writing.	5	4	3	2	1

Training Activities

Circle the response that best describes the quality of each training activity:

	Excellent				Poor
5. Get-acquainted activity.	5	4	3	2	1
6. Lecture: "Planning and Setting Objectives."	5	4	3	2	1
7. Case Study: "The Mayor's Memo."	5	4	3	2	1
8. Individual and Small Group Task: "Writing Objectives."	5	4	3	2	1
9. Management Simulation Game: "The Communication Tower."	5	4	3	2	1
10. Closing: "Application Plans and Evaluation."	5	4	3	2	1

(Continued)

Training Components

Circle the response that best describes the following training components:

	Clearly Evident				**Vague**
11. The training objectives were:	5	4	3	2	1
	Excellent				**Poor**
12. The organization of the training was:	5	4	3	2	1
	Excellent				**Poor**
13. The work of the trainers was generally:	5	4	3	2	1
	Very Interesting				**Dull**
14. The ideas and activities presented were:	5	4	3	2	1
	Very Adequate				**Poor**
15. The scope (coverage) was:	5	4	3	2	1
	Very Beneficial				**Waste of Time**
16. My attendance at this training program should prove to be:	5	4	3	2	1
	Excellent				**Poor**
17. Overall, I consider this training program to have been:	5	4	3	2	1

General Comments

18. The stronger features of the training program were: ______________________________

____

____

____

19. The weaker features were: ______________________________________

____

____

____

20. General comments: ____

____

____

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TRAINING OBSERVATION GUIDE

Training Program: ______________________________

Date: ______________ Instructor(s)*: ______________________________

Training Process

Circle the response that best describes the quality of these training process components:

A. Training Objectives	**Excellent**				**Poor**	**Not Observed**
1. Relevance to identified training needs.	5	4	3	2	1	0
2. Appropriateness for participants.	5	4	3	2	1	0
3. Clarity and measurability.	5	4	3	2	1	0
4. Participant awareness of objectives.	5	4	3	2	1	0
B. Program Organization						
5. Quality of training agenda.	5	4	3	2	1	0
6. Logical presentation of topics.	5	4	3	2	1	0
7. Adequacy of time allotted to topics.	5	4	3	2	1	0
8. Balance between lectures and discussions/exercises.	5	4	3	2	1	0
C. Instructor(s)						
9. Knowledge.	5	4	3	2	1	0
10. Enthusiasm.	5	4	3	2	1	0
11. Clarity of expression.	5	4	3	2	1	0
12. Attitude toward participants.	5	4	3	2	1	0
13. Ability to stimulate and focus discussion.	5	4	3	2	1	0
14. Overall performance.	5	4	3	2	1	0
D. Training Aids						
15. Audiovisual equipment.	5	4	3	2	1	0
16. Handouts.	5	4	3	2	1	0
17. Exercises and discussions.	5	4	3	2	1	0
18. Text material and supplementary readings.	5	4	3	2	1	0
19. Arrangement of tables and chairs.	5	4	3	2	1	0
20. Training facilities.	5	4	3	2	1	0

**Instructions to Facilitator:* If more than one instructor is to be evaluated, it is advisable to evaluate each separately. Additional forms should be provided for this purpose.

(Continued)

E. Other

21. ______	5	4	3	2	1	0
22. ______	5	4	3	2	1	0
23. ______	5	4	3	2	1	0
24. ______	5	4	3	2	1	0
25. ______	5	4	3	2	1	0

Training Results

Circle the response that best describes how well training enabled the *typical* participant to accomplish stated training objectives or learning outcomes.

Objectives/Outcomes*

At the end of the training session, participants will be able to:

	Fully Accomplished				Not at All	Not Observed
1. Explain the planning function and its three principal components.	5	4	3	2	1	0
2. Name at least five factors to consider in writing objectives.	5	4	3	2	1	0
3. Give an example of a continuing objective and an improvement objective that meet the guidelines presented in the lecture.	5	4	3	2	1	0
4. Explain what is wrong with "The Mayor's Memo."	5	4	3	2	1	0
5. Explain the factors that the Mayor should have considered before writing the memo.	5	4	3	2	1	0
6. Apply principles of clear objective preparation in rewriting the memo.	5	4	3	2	1	0
7. Write objectives for their own work environments that conform with principles of clear objective writing.	5	4	3	2	1	0
8. Use all three components of planning in preparing to construct the tower.	5	4	3	2	1	0
9. Write an objective for the tower construction project at the start of the planning period.	5	4	3	2	1	0
10. Demonstrate by their actions and comments that they believe planning and sound objectives are an important part of the supervisor's job.	5	4	3	2	1	0

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*If a different training program is used by the Designing and Conducting Training Programs team, insert appropriate objectives.

(Continued)

Overall Evaluation

Circle the response that best describes your evaluation of the training process and results:

	Excellent				Poor	Not Observed
Training Process.	5	4	3	2	1	0
Training Results.	5	4	3	2	1	0

General Comments

The stronger features of the training program were: ______________________________

____

____

____

The weaker features were: ______________________________

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Suggested improvements: ______________________________

____

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Observer: ______________ Date: ______________